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A VIEW
OF
THE PRESENT STATE
OF THE
SALMON
AND
CHANNEL-FISHERIES,
AND OF THE
STATUTE LAWS
BY WHICH THEY ARE REGULATED;
SHOWING, THAT IT IS TO
THE DEFECTS OF THE LATTER THAT THE PRESENT SCARCITY OF
THE FISH IS TO BE ATTRIBUTED.
COMPREHENDING ALSO
THE NATURAL HISTORY AND HABITS OF THE SALMON,
WITH
SOME OF ITS PECULIARITIES HITHERTO UNDESCRIBED.
TOGETHER WITH
THE FORM OF A NEW ACT,
DESIGNED TO REMEDY THE EVILS SO GENERALLY COMPLAINED OF;
AND AN ABSTRACT OF
THE EVIDENCE BEFORE THE COMMITTEE OF THE HOUSE
OF COMMONS UPON THE SUBJECT,
WITH NOTES.

By J. CORNISH, Esq.

Truth needs no ornament : in my opinion what she borrows of the pencil
is deformity. JUNIUS.

Then consider of it, take advice, and speak your minds.

Judges, xix. 30.

LONDON:

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PREFACE.

IT is fortunate for a person who publishes a book wanting in its title-page that passport to public favor which lies in a *name*, that his subject requires no such adventitious aid.

On certain subjects of an elementary and scientific nature, a writer's name has great weight ; but with a work of this kind, consisting of a mere detail of facts, and a chain of reasoning, and therefore resting upon its own intrinsic merits, a name ought to have no more influence than in a court of justice is allowed to character against clear and positive testimony. *Facts* are substantiated by evidence, not by opinions ; and *reasons* are enforced by principles and comparison. This work aspires to no

other merit than facts and reasoning possess ; and as far as the interests of the subject are concerned, it is, perhaps, better that it should have no weightier or more specious recommendation. A name may promote circulation, but it should never command confidence ; nothing should be taken for granted ; and a habit of admitting the dicta of others, rather than of judging for ourselves, is and has been productive of interminable mischief. The student of human nature has a problem to solve which will furnish him with employment and vexation all his life, or terminate in disappointment. The question in the present case is, are the facts true or false ? — is the reasoning just or incorrect ? Of this every one can judge for himself. Let not, then, the public be cheated of their own judgment by the naked opinion of any man, however bright his reputation for literature or science. With respect to those points which constitute the leading features of this undertaking, whatever may be advanced to legalize the fish-locks and stake-nets, or to prove that salmon peel are not young salmon, let the public rather judge of these questions by the evidence of facts, experiments, and comparative reasoning, than be influenced by assertions without proof, and opinions without au-

thority. The following pages are written by one who has not only long witnessed the scenes of abuse which they expose, but who, if he did not first kindle the flame that is now blazing from one end of the kingdom to the other, has contributed, he believes, to light it. He has, nevertheless, no other motive in having so done, and in publishing a true state of the case, than that some good may arise out of it to the community. If this cannot be effected to the extent of procuring a new law, at least it may be partly obtained, by putting the old ones in force, *as far as they are practicable*. Still, legislative authority without executive power, is like a highly finished lock without a key, for want of which it can neither be opened or shut, or applied to any practical advantage. I have said thus much, in order to prove that as the name of a person who is unknown would neither further the credit of this work, nor propagate its circulation ; so it ought not to be less worthy of consideration from being *nameless*.

Let me now seriously call the attention of the public to the propriety of forming *County Associations*, for first ascertaining *the meaning and extent of the present laws*, and then for *putting them in force*. I do not here descant upon the advantage which

would arise from such a society, as I have sufficiently, though briefly, explained myself upon this self-evident proposition in the body of the work. I am, however, informed, that there are some independent and public-spirited men in Exeter, (and I hope it is true, because they are a rare commodity in the country,) who are likely to associate for such a purpose. Individuals, exclusively of the odium which attaches to the character of a public informer, cannot be expected to incur the trouble and the expence of multifarious prosecutions, by which they have nothing to gain, and every thing to lose; where the difficulties are so great, the powers so loose, the legal offences so undefined, and the remedies so unsatisfactory, uncertain, and indecisive, that no man in his senses will venture upon the undertaking. To be convinced of this truth, we have only to recollect the determination of the last sessions for this county, where the conservator, from a sense of public duty, instituted a prosecution for obstruction of the passage of the salmon fry. The parties were convicted;—they appealed;—the appeal was dismissed; but, though the blunder was committed on the part of the appellants, the court refused the prosecutor his costs, and he returned home with victory on his side

and 40% less in his pocket. Who will ever attempt this again? The power of the magistrate to convict and enforce the laws is gone for ever; and the salmon fisheries left to the mercy of any individual who may think proper to abuse them.

The river Dart, and other rivers in this county, are to be seen blocked up with fish-locks in the face of open day; in defiance of all law, they may be seen, not merely drawn, but swept, the water being absolutely strained through a net of a one inch mesh, when the law requires that such mesh shall be never less than two inches and a half broad. No other notice is taken of these outrages, than that persons look at them, cry "Shame!" and so dismiss the matter. But if these trespassers were vigorously resisted by a powerful body united for the purpose, such flagrant abuses would speedily cease.

To shew the perplexity and contrariety of the present system, it need only be remarked, that by one act the remedy is by indictment; by another, by information at the suit of the King; under others, by summoning a jury and *qui tam*. All these difficulties create entanglements, and are dismaying; no individual will ever embark in

such a sea of trouble, expence, and danger. No position is, indeed, more true than the homely one, that that which is every one's business, is no one's. I well know the difficulty of bringing persons forward on public undertakings, where there is not some strong incentive of private interest—something which operates more powerfully on the mind than principle; but on the present occasion it may be said, that the *city of Exeter is particularly interested* in the success of this question; for the principal part of the salmon and sea-trout which are taken in the river Dart, are sent thither at a very exorbitant price; when, if these fish were as plentiful as they would be if the laws were put in force, the metropolis of Devon, with a very great and still rapidly increasing population, together with the whole county, (and what is said of the river Dart and the county of Devon applies to every other river and county in the kingdom,) from such an example, would have abundance of this rich fish, at a reasonable and moderate price. At present, as Mr. Heald lately observed of the practice of the Court of Chancery, “*It is enough to make a man's blood curdle in his veins, who has a head to think or a heart to feel,*” to see the wanton and wicked devastation that is every day

and in every place, committed upon the property of the community, for want of public energy, and wise laws for its protection.

August 2. 1824.

POSTSCRIPT.

SINCE this pamphlet was written and ready for the press, I have seen the Report of the Committee of the House of Commons on the subject, and have made an abstract of its contents, which I annex. I have the satisfaction of finding, that in all material points it confirms the ideas I have here submitted, and which were first published in May, 1820.

September 11.

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A

VIEW OF THE PRESENT STATE

OF THE

SALMON AND CHANNEL

FISHERIES.

THE NATURAL HISTORY OF THE SALMON.

To give a description of a fish so well known as the salmon would be as absurd as it would be unnecessary, but in attempting its natural history I may occasionally touch upon points which may have a tendency to further the objects of this inquiry. In Sturt's Elements of Linnæus it is said, that the common salmon, or *salmo salar*, "grows very quickly; it is sometimes six feet long, and weighs upwards of seventy pounds. It is much coveted for the table, and forms in many countries a very considerable article of commerce. Salmon begin to quit the sea and ascend the rivers in the month of November; the impulse which urges them to this progress is irresistible; they ascend the most rapid rivers for hundreds of miles, and spring over cataracts several feet in height. When they have attained a place fit for their pur-

pose, the male and female join in forming a receptacle for their spawn in the sand or gravel, about eighteen inches deep, which they afterwards cover up; and having performed this duty, they hasten back to the sea, being now very poor and lean. The spawn continues buried till the spring. About the latter end of March the young are excluded, and when they are four or five inches long they are called smelts or smouls. About the beginning of May they swarm in myriads; but the first flood sweeps them down into the sea, scarcely leaving any behind. About the middle of June these begin to return to the rivers. They have now grown to the length of twelve or sixteen inches, and continue growing till the end of July or beginning of August, when they get the name of gilses, and are from six to nine pounds weight."

What is meant by their beginning to quit the sea, is, that the great body then enter the rivers in order to go to their breeding haunts. Every one knows that salmon enter the rivers early in the year, though but rarely; they are then called *new fish*, having the *lernæa salmonea*, or *sea-louse*, attached to them. Their number continues to increase as the summer advances, which is the time when they ought to be taken, for they are then rich and good. They so continue until towards the close of the year, when they assume a copperish colour, and are evidently out of season; the great bulk being then in a very pregnant

state, and anxiously seeking a place to deposit their roe. There is evidently a difference in the forwardness of their pregnancy, and the kippers, or males, have not that appearance of unseasonableness that the shedders, or females, have; yet, for want of this distinction, a great many of the former have been destroyed. This, if they pair*, must render the female unproductive, and the destruction of them is consequently a most pernicious practice. The fish which the naturalist speaks of as returning to the rivers twelve or sixteen inches long, are those which we call salmon peal, that is, as the name itself denotes, a fish proceeding from the pea of the salmon. As much difference of opinion has prevailed, and still exists on this point, viz. whether the salmon peal be the same or a distinct species from the common salmon, and as this is a very important question to be decided as connected with the welfare of the salmon fisheries, I have devoted an entire chapter to its investigation. It should, if possible, be set at rest; and I think I have collected such evidence to prove them to be young salmon as will, for the future, put the fact beyond dispute. The naturalist says, that in some countries the salmon form a very considerable article of commerce; they would do so equally in this if they were properly attended to; for there is no country which abounds with rivers more favour-

* Whether they do so or not, will be inquired into hereafter.

able to their increase than ours, and particularly the county of Devon: but it must never be forgotten, and cannot, therefore, too often be repeated, *that, as the salmon, from his singular nature, places himself in the power of man by entering the rivers, unless man affords him his protection, he must be exterminated.* That the reverse of this result might be the case, is proved from the immense number of salmon in places little frequented by the human species.

From hence, and from our own knowledge and observation, it appears that the habits of the salmon furnish an exception to the general law of nature. He is unlike any other fish; being bred in one element and existing in another. He cannot live in the sea alone or the fresh water alone, but requires to live alternately in each: the salt water and the river are alike absolutely necessary to his existence and procreation. What he feeds on in the sea no man knows; for he was there never known to take a bait, nor was any food ever found in his stomach. Yet, that in the rivers they may be taken with bait is certain, for I have myself caught one with a rod and line, and hooked many. The salmon is one of the most valuable fish we have; yet the law, as we have seen, is lamentably defective for its preservation; and, wonderful to say, mankind seem more bent on destroying the whole race of them than that of any other animal, even those which are most obnoxious. Of this there cannot be a stronger and more conclusive

proof than their present scarcity, contrasted with their former abundance. Unless the salmon is protected by law, he must fall under the destroying arm of man, for he is as much in the power of man as sheep or oxen. It is not so with the sea-fish, they have a range more unrestrained. Man may, by improper and injudicious conduct, diminish the number of these, but he cannot exterminate the species.*

The history of many places, particularly that of Chester, informs us, that salmon were once so plentiful, that masters were restrained by their indentures from compelling their apprentices to eat this fish more than twice a week; and there is now nothing wanting but an efficient law to render them as abundant as they were then. No natural cause exists to produce the present scarcity. As to the time when salmon are in season, either in the same or in different rivers, and as to the time when the rivers ought to be put in defence, they are circumstances of so much consequence that we shall give an entire chapter to their consideration.

Whatever may be thought of the old acts, and the advantages which may be derived from them by

* Salmon are called fish of prey — a turkey may as well be called a bird of prey, because he eats insects. Fish of almost every kind, as well as birds, are animals of prey. But surely we cannot rank the salmon with the rapacious shark and porpoise, any more than we do the turkey with the carnivorous eagle and falcon tribe.

constructive interpretations, every one must admit that there is a difficulty, trouble, delay, and expence in putting them into execution, which may be removed by a new act; and since new methods have been devised for evading the old laws, new remedies must be suggested to meet such new inventions. The two great deficiencies which mark the whole of them, are, the want of a decided and express power to keep the rivers open during a certain part of the year, and to remove the fish locks by express and not by implied terms. It does not seem that the spear was known in ancient times, as it is not mentioned in any act but the local act of the 43d of the late king. All the acts, too, are silent upon the power and duties of the conservators, which may be explained and defined by a new one. And whilst impervious and unlawful weirs, — avowed public nuisances, — are fixed across rivers, as if on purpose to destroy the whole species; whilst gangs of idle, disorderly fellows are employed by night and day in destroying the fish by the spear when in the very act of shedding its roe; and whilst locks, traps, and hutches, and all sorts of cunning devices are erected to catch unseasonable fish in going up the rivers, and to prevent the old back or spent fish from returning to the sea, without allowing a chance or possibility of escape by an aperture (called in Ireland, the king's passage), it is no wonder that salmon are so scarce and dear. Nothing, then, is wanting to restore this excellent fish to its former abund-

ance, but such plain measures as common sense and common reason dictate ; nothing, in fact, but giving the fish *fair* play, where at present he meets with only *foul* play and *unmerciful* treatment. It is only requisite that the transaction be honestly and openly conducted ; there must be no partiality, — no sneaking after fish-locks, — no monopoly ; every thing must be fair and open. — Individual interests must give way to the general good, and nothing need then be apprehended for the result.

Various are the opinions of naturalists with regard to the mode of propagation, the increase, the growth, habits, and size of the salmon ; some affirming that they continue to grow as long as they live, and others thinking differently. Upon many of these points, in all probability, we shall never be wiser than we are. Goldsmith says, that fishermen assure us that sea-fish must be six years old before they are fit for the table. According to Mr. Pennant, salmon have been taken weighing seventy-four pounds. Whether such rare productions of nature were the formation of a single year, or the accumulated growth of many years, it is not only not easy, but perhaps impossible to ascertain, as well as many other particulars relating to ichthyology, to salmon in particular, or fish in general.

The mode of impregnation is very singular ; it has been so often seen that no doubt can be entertained of the fact. Yet Goldsmith says, that the

manner in which the eggs of fish are impregnated is wholly unknown. There is no great use in entering into a further detail on this head, yet we shall say a little more about it hereafter. Though the grand distinction of fish is between those which are cetaceous and those which are cartilaginous, yet there is no reasoning by analogy, or drawing conclusions from one animal to another, or even forming an opinion on probability, as to their increase. The fecundity of the salmon is very great, the roe of a single one amounting, as I have been informed by a person who counted it, to about 600,000. This experiment was made in the usual way, namely, by first weighing and then counting a certain portion, and afterwards weighing the whole mass. Yet this increase bears no sort of proportion to the number of pea in many other fish. The sturgeon produces the greatest number that I ever read of, being no less, according to Leuwenhoek, than 150,000 millions,—an amount equal to that of all the inhabitants of the earth; the female cod-fish gives 9,340,000; and the common crab 4,334,000. The porpoise produces only one, and yet porpoises are more plentiful than sturgeons. There seems to be no positive general rule in Nature upon this subject: such is the extent and the variety of exceptions, that we are forced to the necessity of considering every animal distinctly and individually. What analogy proves to us that if the claw of a crab be torn off another will supply its place; that the polypus may be cut

in pieces, and yet the separated part shall produce a perfect animal; that superfoetation shall exist in some animals and not in others; and that a certain insect of the gnat genus shall repeatedly produce without any connection with the male; and a thousand other instances of exception operating against the general law of Nature? All prove to us, that we are to look for certainty to each animal individually, and that we shall seek in vain to elicit it from the similitude that one animal may bear to another. Nature seems upon all occasions as though she disdained shackles of rule, preferring to exhibit, in whatever view we contemplate her works, the unlimited and uncontrollable power of the Creator.

As to the growth of salmon, my opinion is that they would grow much larger than they are ever seen in Devonshire, if the spent fish could return to the sea; but from such information as I can gather upon this head, all the spent fish are either killed in mill-traps, or pine to death from inability to regain it. I have, in fact, the concurrent opinions of others who have paid much attention to this particular part of the subject, that almost all, if not all, the salmon taken are the first year's fish, being from twelve to eighteen months old, varying a little in size from eight to ten and twelve pounds; whereas formerly, when there was a free passage over Totness weir up and down, with an escape in the centre, very large fish were constantly met with. The largest I ever saw was

forty-seven pounds, but nothing of that kind is now seen ; a fish seldom exceeds twelve pounds, and very few weigh so much. From hence, I think, it is a rational conclusion, that they seldom spawn more than once. Supposing that Nature is alike every where, I draw my inferences from the river Dart. Shaw says, that salmon, like swallows, visit the selfsame spot every season, as has been ascertained by the experiment of fastening a small ring to the tails of some individuals, and thus setting them at liberty, when they have made their appearance at the same spot three successive seasons. From other facts, which will be mentioned hereafter, I believe there is no doubt but that they return to the river in which they were bred.

There are some of the habits of this fish with which we are well acquainted, and which do not rest upon opinion, but are notorious facts. Though we do not know to a certainty whether a salmon attains his full age in one, in seven, or in fifty years, and in all probability we never shall know it, yet we *do know* that salmon come from the sea, and will, *if they can*, go up the rivers 500 miles to deposit their roe ; and the fish into which such roe becomes animated, will, *if they can*, in the proper season, betake themselves to the sea, and after a time return again to the rivers. These habits are notorious, and they furnish a manifest conclusion, establishing another fact equally obvious, that if the old fish *cannot go*

up the rivers to breed, no young fry can come down the rivers to enter the sea, and there to grow into adults; consequently, there can be no increase, and if no increase, there must speedily be extermination.

There is, however, one of the habits of the salmon on which it is necessary to say a few words, as bearing upon the present subject, in order to show and to establish the detrimental effect of impenetrable barriers across rivers, either by weirs or otherwise. Dr. Turner says, "*when it so happens that their passage is effectually obstructed, they soon grow lean and sickly, and in a year or two pine away and die.*" This can be but an opinion, though, perhaps, founded upon good grounds; but it is an opinion so reasonable and so conformable to the nature of the fish, and, by analogy, to the nature of all other animals, that it contains, if not positive, at least presumptive evidence of its accuracy. We all know the irresistible instinctive purposes of this fish to get up into the rivers; their wonderful efforts show it. We all know that it is *only* in the sand-beds of rivers that the fish can spawn, and *they know it at the least as well as we do.* If, therefore, they are thus thwarted in complying with the dictates of instinct, which never misleads or deceives, it is most reasonable, if not conclusive, to infer, that they do, as Dr. T. says, "*pine away and die;*" for a salmon, as is observed before, being both a salt and a fresh water fish, cannot live without having access to both: if he is de-

nied either, it is alike death to him. It is also known, that roe, if shed in unpropitious situations, to which the fish is compelled by necessity when withheld from those to which nature directs him, becomes abortive. Why this should be the case, why the egg cannot be hatched in the sea, or in the tide-way in rivers, like the eggs of other fish, is a mystery, like many other mysteries, which will ever remain undiscovered ; nor should we be the wiser or the better if we could develop them. The undoubted fact, however, is, that unless the fish can attain the necessary sand-beds high up the rivers, the pea come to nothing. Hence follow the pernicious effects of these obstructions, which, preventing the *new* fish from going up the rivers to spawn, drive them into traps, where they are caught and killed. They are obeying a resistless necessity in hunting for an aperture to get up the streams, and are thus forced into the fishlocks. The situation of the *spent* fish *above* the weirs is just as bad ; they are hemmed in, and prevented from retiring to the sea to recruit their strength and invigorate their system, until they lose almost the appearance of their species, and finally perish. In this state they are quite uneatable and unwholesome, and I have no doubt would poison any one obliged to taste them. These back fish are not those which the spearers destroy ; *they* kill the fish as they *come from* the sea to breed, not those which are returning to the sea after breeding. It must, therefore, appear evident

to every disinterested and candid mind, that the salmon fisheries can never prosper whilst these obstacles, interfering so much with the instinctive habits of the fish, are allowed to exist. I do not mean to say that all weirs should, even if they could, be swept away entirely, because they may be nationally advantageous in a commercial point of view, both for the miller and the manufacturer; but I do mean to say, that all weirs should be so constructed, and nothing is easier, that the fish in times of flood may easily go up to breed; and that, after they have bred, they may be able again to return to the sea.

I well remember seeing some years ago on the river Teign, a weir which had *elevated* stakes at the foot, over or through which it was impossible for a fish to pass: the stakes were placed there to force them into a lock or trap by the side, which easily admitted them, but from which they could not escape; and, consequently, the occupier of this device had the power of taking every fish upon this fine river, sizeable and unsizeable, seasonable and unseasonable, the public thus lying at the mercy of an interested individual.

On the Avon was a device something like the former. I went on purpose to see it, and I have been informed that there are several on the river operating pretty nearly in the same way. The one I saw was contrived thus:—The mill-leat occupied nearly the whole stream; of course all the returning or old fish entered into this leat; they

could pass no further than the mill; about ten or twelve feet above the mill was a waste fender, and below this fender, or between it and the natural stream, on a sharp descent, was a kind of *wicker or basket work*. The miller had only to draw his waste fender, and every fish following the stream must pass into this trap. He then stops the water by letting down the fender, and every fish is upon dry land in two minutes.

It was painful to see the millions of salmon-roe which strewed the sand-banks of the Dart in the tideway below Totness weir about three years ago: the old fish could not pass the weir, and when the natural season arrived they were compelled to shed their spawn where they could. The whole proved abortive; for, as those sand-beds were dry at low water, and the sand shifted with the tides and the floods, the pea were uncovered and lay so thick upon the surface, that a man could not put his foot on the sand without crushing a hundred to pieces at a time.

At the period I allude to it was quite lamentable to see the unavailing efforts of the salmon to get over Totness weir. I was an eye-witness to it; repeatedly beaten back, they tried again and again, until they were quite exhausted, and had scarcely strength enough to push their noses above the surface of the water. What loss this obstruction must produce to the public it is beyond any known means of calculation to estimate. But from the number of old breeding fish that

were destroyed at the same time by the spear alone on the rivers Avon and Harbourne (the latter only a branch of the Dart) it has been calculated that 200 million salmon spawn were prevented from coming to life. How many were lost to the public by the premature death of those breeding fish of which no account could be procured, it is impossible to say: a few years since sixty old fish were killed by one family, and perhaps carried into one farm-house. This murderous operation is always carried on in the fence days, when the fish are unseasonable, and when the destruction of one is the destruction of a great many thousand, even allowing for all accidents, and for the loss of those destroyed by other enemies.

I suggest, then, that there should be a grating affixed at the entrance of every mill-leat to keep the fish, both old and young, in the natural stream; and where weirs are erected in order to conduct the water into artificial cuts, there ought to be an escape of sufficient dimensions for the fish to get away and keep in the natural stream also.

There ought likewise to be gratings placed before every mill-wheel, which is in general not above a quarter of an inch from the bottom-floor; for the fish seeking and trying for a place to get out of the mill-leat are very apt to get entangled with the wheel, and they are then crushed to death. I have been informed that seven old returning fish were destroyed thus in one night at one place,

and that a place where such an occurrence would be least expected ; how many, then, must be killed in this way of which we never hear !

The use of that dreadful instrument the spear should also be abolished by every possible means, and even by measures of extreme severity, particularly in the river Dart, where it is principally employed. Like a deadly pestilence it destroys both bad and good ; every thing dies before it ; whatever the spear touches it kills, if it does not catch. Besides, it is never used by those who have a right to fish, but only by poachers, who would be so much better employed in a lawful and honest calling. This practice is one of the greatest encouragements to idleness, and all those bad habits which idleness and nocturnal employments create. When men are thus engaged all night, they cannot be very fit for labour by day. Nor is this all, for various other things are found to disappear besides salmon, when these gentlemen are at work. A great injury is also done to young timber ; to avoid suspicion the spear-head is carried in the pocket, and for the shaft a young tree is cut down as soon as the game is seen ; for carrying a spear-pole in the hand might excite observation. Four years ago, a very large spear was in use, but they now use a well tempered small spear, which is found to answer the purpose equally well, and can be better concealed. I was once an accidental witness to the fact of a large salmon being struck with a spear in the very act of spawning. It was an appalling

sight to see the poor creature writhing in its agonies. I turned from it with disgust, deploring that such a barbarous practice should continue, which, for one unwholesome fish, was the means of destroying so many thousands, that taken in their proper season, would be food to the poor, and a delicacy to the opulent.

The river Tweed, where is said to be the largest fishery in the kingdom, is supposed to yield 300,000 salmon annually, that is, *communibus annis*. This number is about one half the produce of one salmon, and the thirtieth part of that of a single codfish. Hence, it is highly probable, that the same kind of work is carried on in this river, as is practised in the rivers in Devonshire. There is a note in "Daniel's Rural Sports," under the title Salmon, which says, that there is a river in Kamtschatka, where salmon are in such abundance in the season when they return from the sea to the rivers, as absolutely to choak the river, and cause the water to overflow its banks. And there is no doubt, but that they would be plentiful enough here, if the obstacles already enumerated were removed. However, considering all the circumstances, the circumventions and contrivances that are adopted to annihilate the species, it is really surprising, that there should be a single one in existence.

Most animals, whether for the profit, or the pastime of mankind, are allowed some seasonable resting time for increase; but the sal-

mon, much more valuable than hares, pheasants, or partridges, is not allowed one moment's rest, not even for procreation. The cruelty of such conduct is only equalled by its impolicy.

It is thus that the salmon fisheries, as far as they concern the public, are completely useless — so much so, that there is one universal outcry against the owners of fisheries throughout the country. It is, indeed, to them and to the poachers, that the present scarcity of salmon is to be attributed. Every other animal in the known world, requires, and obtains, rest and retirement during gestation, and at the time of bringing forth, and is allowed opportunity for the escape and growth of its young ; but this harmless and invaluable creature, though warned by unerring instinct where to go, is first obstructed when its body from a state of pregnancy is ill able to combat obstruction, and delayed when delay is but another word for death ; then hunted down like a wild beast, worried from place to place, unceasingly persecuted, and ultimately impaled alive on an iron spear, generally in the very act of spawning. Not even the shades of night, when most other animals seek and find respite from their persecutors, are to him any protection ; watched and traced to his haunts by day, allured to certain places at night by means of fires, he falls an easy victim to his more cunning and unfeeling destroyer, at a moment when he expects no mischief, and when he should meet with no molestation. Should he miraculously save himself from such impalement, what then awaits

him? he is taken in a trap river, returning to the sea; starved by being imprisoned in a mill-stream; or pines to death for want of that element which Providence has made necessary to his prosperity, his increase, and his existence.

Such is the true state of the salmon fisheries. Will any reasonable man deny that a new law is imperatively necessary to prevent the abuses which have brought them to such a condition?

Little ingenuity is required; common honesty and common sense are capable of suggesting the principal things which are necessary to be done. Remove the obstructions and the fish-locks; keep the fish to the natural stream; prevent all unsizeable and unseasonable fish from being taken; protect them during the fence days, and let no fish be taken but by the fair and legal nets, with an attention to the minor points before adverted to, and hereafter more particularly set forth, and we soon shall have no reason to complain of the scarcity of salmon, or fish of the salmon kind. I am thoroughly persuaded, as I shall hereafter endeavour to demonstrate, that the scarcity of this fish does not proceed from any natural cause whatever, but entirely from one which may be easily and effectually remedied.

Note.—About seventy or eighty years ago, Sir Edward Seymour erected a hutch on a narrow part of the Dart, about midway between Totness bridge and the weir, for the purpose of taking all the salmon in the river; as none, or very few could

go up the river without either being taken, or stopt. The consequence of this was, that all the fisheries in the river were ruined, and his own among the number. This hutch being placed in the full stream, impeded the course of the water so much, that it broke out a new channel by the side. Thus the object of the hutch was defeated; and falling into decay, it was never after repaired, but in process of time, went entirely to pieces. The foundation of it was visible a few years since. In the course of two or three years after, the river had found a new channel, and this hutch, which has ever since, and to the present day, gone by the name of Seymour's Hutch, was destroyed, and salmon became as plentiful as ever, resuming its ordinary price of two-pence and three-halfpence per pound. During the existence of Seymour's Hutch, such was the scarcity of salmon, that it sold for two shillings and sixpence per pound; and I have heard an old man, who lately died at the age of ninety, positively declare, that he himself sold a salmon for as much money as enabled him to purchase, and that he actually did with the money buy, a cow and calf. I have no reason to doubt the truth of it; nor is it at all improbable. The old man used to mention the circumstance as a sort of wonder, that he should have bought a cow and calf with a salmon; and he would then explain the fact, thus: Suppose the fish to be only thirty pounds, (but it might be forty or fifty,) at two shillings and sixpence, its value would be three pounds fifteen shillings. This sum would,

I should think, seventy years ago, have purchased a small cow and calf. I cannot, of course, vouch for the truth of his assertion, but the man declared it when at a very great age, and when he could have no motive or interest in telling me a falsehood. This is an additional proof, if any were required, that the grand obstacle to the increase of the salmon fisheries, is, the impediment which the fish every where meet with in ascending and descending the rivers; the two grand evils are, the obstructions by fish-locks and the spearing. But it is curious to see how interest sports with principle. The spearers cry out against the weirs and obstructions, because such weirs and obstructions spoil their sport and diminish the product of their harvest; and the owners of weirs are for punishing the spearers with the utmost severity of the law. Thus the one is for plucking out the mote that is in his brother's eye, without perceiving the beam that is in his own. Every one has a right to make the most of his property; but that right should be exercised fairly. The right of taking fish is a kind of common right; one man takes them at one place, and another man at another place; and so on to a third and a twentieth; but if the first man can erect an impervious weir, to bring up all the fish at one particular place where he may have the whole at once, how are the others to have their rights? If a man has a right to stock a common with fifty sheep, and were to turn in five hundred, the utmost number it could

feed, where would be the use of the pasturage to the other commoners? In this conflict of private views, the public is neglected and forgotten; but the public have nevertheless an interest and a right; and that interest and right ought to be asserted and established.

I have mentioned the circumstance of the destruction of salmon by Seymour's Hutch, as the obvious effect of an equally obvious cause, not only to corroborate the preceding remarks, but to refute an opinion which has lately gone abroad, rather specious at first view, but on close investigation obviously groundless and untenable; and to draw a comparison between the probable correctness of this new opinion on the diminished quantity of salmon, and the cause of that scarceness, as previously stated. The new opinion is, that it is owing to the great use of lime in agriculture, in the western counties, that salmon are so scarce. Now let us enquire into the reasonableness and consistency of this opinion. Lime destroys all other fresh-water fish, as well as salmon. That the eel and the trout almost instantaneously die before it, is notorious and indisputable; but eel and trout are as plentiful as ever. If the use of lime in agriculture destroyed the salmon, it would destroy the other fish—it does not destroy the other fish; therefore, it destroys not the salmon. If the lime used for manure on certain grounds, though they have so little communication with rivers, as to render it very improbable that its baneful

effects should ever reach them, destroyed any salmon, it would destroy all. If it destroyed the salmon generally, why did it not destroy those hundreds of poor pregnant and emaciated fish, which have been lying at the pool of Totness weir throughout the winter, waiting for an opportunity, and almost beating themselves to pieces, in the ineffectual attempt, to surmount that destructive nuisance? — These fish were not destroyed by lime used in agriculture; they were not destroyed at all, until they were taken in nets, after the defence of the river expired. Some of these fish, the females, which were in such a state that they could not be made use of, were put above the weir; the others, all unseasonable, were clandestinely sold about the town, at a low price. The poor forlorn females were sent up the rivers to breed, without their kippers; so there must have been a rare increase.

ON THE CLOSE SEASON, OR THE TIMES NECESSARY
TO PUT THE RIVERS IN DEFENCE.

I HAVE already briefly observed, that the season for taking salmon ought to be the six summer months, commencing with April and ending with September; that they do not make a very frequent appearance in our rivers early in the year, and that therefore new fish are then always scarce and dear. The reason is evident:—the old fish are either at that time destroyed in the mill-leats; shut up in the rivers unfit to be taken and not eatable; or they are in the sea, or on the coasts, and have not returned to the rivers in a purified and wholesome condition. In April, after having had the advantage of feeding in the sea, they begin to be rich and fat, and return to the rivers. They so continue the whole summer, increasing as it advances, rising with the flow of the tide, and particularly attracted with the freshets after heavy rains. This is the time, namely the six summer months, and the only time that they should be caught, and then only with the legal net. If properly protected in the other six months, they would then be so abundant as to be sufficient for every one, for every place, and for every purpose; the superfluity of the summer would furnish, in a

salted state, an ample supply for the scarcity of the winter. Deprived of the rich and luxuriant food of the ocean, and depending entirely on the meagre productions of the fresh water, the richness of the salmon soon begins to diminish; the flesh then changes from a rich crimson to a pale yellow; and hence arises the notion of a salmon being in season in different rivers at different times of the year: while the fact is, that they are only in season when they first come from the sea. After the roe is formed, though the fish may be eatable and tolerably good, yet from that period the flesh gets worse and worse, until it becomes absolutely disgusting to the sight and nauseous to the taste; consequently they are in season in all rivers at the same time of the year, though individual fish may be in season in the same or different rivers at different periods. — It may happen that a fish taken in the Exe shall be good, when one taken in the Dart shall not be so, and *vice versâ*; but a general conclusion from a circumstance of this sort should not be drawn when the goodness or badness of the fish entirely depends on the time he has been absent from the sea, and returned to the rivers. A bad and a good fish may be taken on the same day in the same river.

It is likely that salmon shed their ova at different times: one author now before me says, so early as August; I have no doubt but some may, but the great bulk certainly do not until later in the year; it is this difference in the time of spawn-

ing, which may account for the different times when particular fish are in season. The breeding season of all animals is not uniform:—for instance, the bitch breeds in spring and fall; the mare always in the spring; but the cow *at all seasons*. With regard to salmon, there may be exceptions to the general rule; they certainly do endeavour to beat up the rivers at all times of the year, and this must be for some natural purpose, and none more likely than that certain ones may then want to rid themselves of their burthens. It is said, also, that one of their motives for entering the fresh water, is to rid themselves of that troublesome insect the *lernæa salmonea*, which adheres to their skin when they first come out of the salt water (see note to the Abstract); but their natural and greatest enemy, except man, is the porpoise, by whom they are so far intimidated as not to go far to sea, but rather to keep on the coast, among the rocks, where they find abundance of food, near the entrance of rivers; and though no food is found in them, yet it is not likely they would fatten without it. These ravenous animals may also drive them into the rivers, for upon many occasions they have been known to pursue them thither to a considerable height; a large fish of this genus was some time since taken in the Dart, with several salmon in his stomach. The otter is also a very great enemy to the salmon; and a price should therefore be set on the head of that animal.

If cock partridges were to be shot in the season of love, and the hens were to be killed when in the act of incubation, these animals would soon be as scarce as salmon; if we wish to increase the breed, the same policy should be observed with regard to both.—At these times, then, the fish should be neither *obstructed* nor *taken*.

Now the *great influx* of the salmon into the rivers, being in the fall of the year, and their object being to find proper places to deposit their ova, this is the time when fishermen, tempted by the number of the fish, and losing sight of the ultimate consequences, are so anxious to catch them;—their golden dreams of avarice getting the better of their judgments. But this is the very time that not a single fish should be *destroyed, taken, obstructed, or even disturbed*; and the result of such a number of breeding fish ascending to their natural destinations, and being protected at those places from the spearers and the fish-locks, would be so vast an increase as would gratify the most sanguine expectations of gain, the most delicate taste, and the most craving appetite. But if the representations of individuals, who are blinded by an apparent interest, even though they may be sincere and actually believe what they wish, should be allowed to counteract all those obvious dictates of nature, which regulate the motions of the fish; in vain shall we look for the improvement of that which is now the subject of much complaint from one end of the kingdom to

the other. A worse system than the present cannot be : no one then can object to a change which may multiply, but cannot diminish — which may improve, but cannot deteriorate — that which is indeed already at its worst. I will here mention another fact, which I believe no man will deny, and the reasoning which follows from it is of such a nature as to be absolutely in my mind unanswerable. — It is two-fold: *First*, the great body of the fish are attracted to the rivers by freshets or floods, for the purposes before stated, after heavy rain. *Second*, it is notoriously true that no fish can get up the rivers and surmount the barriers placed in their way, by weirs and other obstacles, unless the rivers are swollen by floods. Suppose then the close time should commence on the 1st of November (and by that horrible and murderous act, the 43 Geo. 3., it is the 15th of November), the fish are ready and waiting to go up the rivers as soon as the *grating*, and other impediments, are removed, but cannot, for want of a flood. Now who shall say that there will be a flood at that critical juncture ; it may not arrive for a month or months after the fish have been, through all the month of October, perishing for want of a means to comply with the laws of Nature. — If a flood draws them into a river in October, and they cannot pass the barriers, they are all liable to be caught, though it is the very time when they should be spared. This is not an impossible, a preposterous, or an hypothetical case : it is perfectly likely to happen,

and then there is an end of the whole brood for that year. But on the contrary, if the close time commenced on the 1st of October, and all artificial obstructions were removed, the fish being drawn into the rivers by the equinoctial rains, would immediately avail themselves of the opportunity, and go to the places of which they are in search. Surely this is a case in which the laws of Nature should not be defeated by institutions grounded upon false reasoning and interested views.

The great object is, *the first flood after Michaelmas*, the rivers being then swollen by the equinoctial storms. It is *then* that the salmon should be protected, *and the rivers thrown open to them*. Another strong reason why the close time should commence on the 1st of October, and all obstructions be removed to afford the fish every facility to go up the rivers, is, that these floods last but a very short time: the waters once abated, the opportunity is lost, and the fish are again exposed to all the injuries which have been enumerated.

I therefore repeat, that the close time should commence on the 1st of October, that the fish may avail themselves *of the first flood after Michaelmas*; and I believe there is no foundation whatever, either in reason or fact, for supposing that salmon are in season in different rivers at different times. They are seasonable or unseasonable during the summer months, as they come from the sea, with the tokens upon them. Place two

fish side by side, taken in the same river, at the same time, the one going to the sea, and the other coming from it, and the truth of this observation will be manifest; the two fish will hardly look like the same species. The same may happen in two different rivers, and it is therefore not fair to conclude, as a general rule, that all fish are in season at different times in different rivers; they all come from the sea, and it is that alone which makes them seasonable.

The law of Nature must be the same at all places, and has the best claim to be adopted as our guide. Can we suppose that sea fish are in season at Southampton at one part of the year and at Torbay at another? Whatever may be the opinion of others, such a supposition appears to me irreconcilable with nature, with reason, or with common sense.

ON THE SPECIES OF THE COMMON SALMON, THE
SEA-TROUT, AND THE SALMON-PEAL ; AN ENQUIRY
WHETHER THEY ARE ONE, OR THREE DISTINCT
SPECIES.

THIS is a most important and vital branch of the general subject, and the question should be put at rest, because if the sea-trout and the salmon-peal are allowed by the legislature to be taken, under an idea that they constitute a distinct species, while they are in fact the same species, then an immensity of mischief is committed ; but if the three form but one species, then the two latter are unsizeable fish, and are prohibited by law, unless by the local act before-mentioned, from being taken. There is also a great diversity of opinion among mankind, some strenuously contending that they are three, and others as stoutly maintaining that they are but one species. I confess myself to be of the latter opinion, but I will endeavour to investigate the question dispassionately, and without prejudice. When the evidence of facts circumstantial and positive shall be placed before the public, they will judge and determine whether these fish are of the same or different species.

I will first state the affirmative evidence, that they are the same fish ; and then produce what is

said, as far as I can collect, of a negative tendency, to show that they are not. I have not the least interest either one way or the other, but as a private member of the community; my object is solely to find out the truth, if I can, that justice may be done to this subject.

But before this enquiry is entered upon, it will be necessary to make a very few prefatory general observations on the species of animals. The only difference of animals in nature is species: by this word I mean, without giving a specific definition, animals of a particular kind that congregate and breed together; and in a state of nature, free from constraint, never amicably intermix with animals of a different kind; but under that constraint, if they do mix and produce with other animals of a very similar conformation, that such produce being male, are sterile and never reproduce. Without this law there would be universal confusion. Naturalists, according to their different ideas, and for the conveniency of study, have classed certain animals which have certain general characters in common into genera; but in certain other animals of the same species there are varieties, such as the dog and the pigeon, and this occurs even in the vegetable world. Whether these varieties are natural and original, or whether they are the effect of accident or other causes, has nothing to do with the present question. Thus then, when authors speak of, I think, twenty-nine species of sal-

mon, they must mean fish of the *salmo* genus ; such as a great variety of fish which have some characteristics in common with the salmon, but are no more salmon, or any thing like it, than a pig is like a horse, further than that each has four legs. This then is only opinion, but that species is a natural distinction is a decided fact. They call a little grayling, which never exceeds seven or eight inches in length, a salmon, *salmo salmoletus* ; a common trout, *salmo fario* ; and the different sorts of chars are all ranked with the *salmo*, though they are entirely fresh-water fish, and never go into the sea. Authors may class 29,000 such fish among the *salmo* species, if they will, but that will scarcely make them salmon ; they are all a distinct sort, having nothing to do with the *salmo salar*, or common salmon, which I believe is the sole object of the laws we have been just considering. I also believe that “fish of the salmon kind” means the peal and the sea-trout, which are now contended to be young salmon ; and I do not think that of this fish there is more than one species, but rather that it is the same in England, Ireland, Scotland, and the north of Europe. What the American salmon may be, I know not, but I have been told they are not different from our own. Some contend for varieties of species, because the salmon in some rivers differ a little in figure, colour, and flavour from those in others : there is fifty times greater apparent dissimilarity among the oxen and the sheep of different parts of the king-

dom, nay, even of the same county, yet no one ever thought of pronouncing them to be of different species—they do not even form different varieties; they are one and the same animal, altered in appearance only and natural size by the effect of food and climate, their produce not only reproducing, but absolutely improving by the mixture. There must then be a much better reason adduced to prove a difference of species in salmon than merely that of a trivial difference in colour and shape. Since therefore the salmon, the *salmo trutta* or sea-trout, so called, the salmon-peal and the smelt, spawn or fry, associate together, and breed together, are in every respect perfectly alike, and never intermix with other fish of a different species, I contend that there is the strongest reason, exclusive of the other circumstances which will be mentioned in the progress of this enquiry, to believe that they come within the meaning before stated of the word species, and are one and the same kind of fish. I will now proceed to state such facts as appear to me to prove that the peal and *salmo trutta* are young salmon; I repeat, they are facts and not opinions; and I am content to abide by the conclusions to which they naturally lead.

1. Commencing with the salmon smelt. This with the salmon-peal, the *salmo trutta*, and the salmon, are alike in every respect internally and externally, only varying in size, and except that the back of the smelt is always white before it

goes to the sea. The smelt in May is from four to five and six inches long; it goes to the salt water as soon as it is able. In July and August a fish exactly resembling it, and called in Devonshire a salmon-peal, comes into the fresh-water rivers; it is supposed by some to proceed from the pea of the salmon, called in the north whittings, and by different names at different places. There is not, except in size, the slightest distinction in shape, fin, branchia, rays, or colour between this and the smelt. These fish remain with us about two months or six weeks, and when the rivers in the month of May swarmed with smelts they were very numerous; but until the present year they have been in the Dart extremely scarce, diminishing as the salmon diminished; they weigh on the average about half a pound, some less and others more. They disappear from the rivers about the latter end of August and beginning of September. There is a very great difference in their colour, which is the criterion of their goodness; some are very red, others pale; the red are considered as the best for the table, and the more they incline to a pale colour the worse they are, becoming at length absolutely uneatable. This difference of goodness and of colour I attribute to the length of time they have been from the salt water, for they have also, like the common salmon, the *lernæa salmonea*, when fresh from the sea. The probability, indeed I may say the certainty, is, that these fish return again to the

sea from whence they came, because they are sometimes caught in the sea, but are never caught in the rivers after they disappear in August. Early in the ensuing year, even in January, February, March, April, and May, another fish makes its appearance in the fresh waters *exactly similar to the former*, varying not in the slightest degree internally or externally, being from one to two, three, and four pounds' weight, according to the season of the year in which it happens to be caught. Here we are to calculate upon the increased size of the fish, and observe how it is proportioned to the interval of time, namely, from August to January, because a material inference is deducible from this fact. These, too, like the former, have a great variety of provincial appellations, such as truff, rouges, sea-trout, and the like, but I find that the general name, according to scientific writers, is *salmo trutta*. As the summer advances this fish begins to disappear; though some still come up and down with the flow of the tide so late as June and July, and are frequently taken with natural and artificial bait, (passing over the full-sized or breeding salmon, which now begin to make their appearance, and attending only to the fish, as we imagine, in a state of growth.) In the early part of the ensuing year straggling young fish of different sizes, from five to six, seven, and ten pounds come into the rivers fresh and good, with the sea lice on them; this so rarely happens, that though a new fish of this description

sells for a great price, yet it hardly pays the fisherman for the expense of nets and loss of time. These fish continue to increase in number, size, and goodness as the summer advances; but it is an *universal remark, that no such large fish are caught now as used to be taken formerly*; which I attribute to the spent fish being either destroyed in fish-coops, or prevented by other means from returning to the sea, so that the chief influx of fish in the fall of the year is of young fish which have never bred before.

This is a statement of the progress of these four fish, that is, the smelt, the peal, the truff, and the salmon — whether one, two, or three species remains to be determined from the facts which I have stated, and those which will follow. I have not made it a question whether the smelt is a different species, because I never heard any one contend that it was. These four fish are as much alike as four hen's eggs, excepting in size; is it not then a rational inference, that they constitute one species?

2. The salmon-peal and the truff are never seen in any rivers but where there are salmon; and where salmon are, there they are: the former are plentiful or scarce according to the number of the latter; and this is a strong corroborating circumstance.

3. The flesh of all the three fish is of the same quality and character, flaky, rich, and luscious, and soon satiating; the colour and quality vary according to the length of time the several fish have

quitted the sea ; the high crimson is considered to possess the finest flavour, but it is entirely matter of opinion which is the best of the three ; in general a high-conditioned salmon is thought the best. All *three* when they arrive in our rivers from the sea have the *lernæa salmonea* upon them. This fact appears to me to be conclusive in itself.

4. I never met with any man who was able to declare that he had seen a young salmon of one, two, or three pounds' weight ; nor do I apprehend that such ever was seen, *unless it were in the character of peal or truff*. Yet salmon of this description must be always in our rivers, upon our coasts, and in our power, and yet none are ever seen or taken. No one can tell us where they are, or where they go, or what becomes of them, which is a most extraordinary circumstance, if such salmon really exist. It is more particularly so, as

5. We see and are perfectly well acquainted with the young of every other kind of sea and river fish, nay, of aquatic insects, from the very largest to the smallest, as well those which are viviparous as those which are oviparous, from the whale to the pink minnow and the shrimp. Why then do we never see the young of the peal or the truff, if there be such ? The transition from the fry to the full-grown salmon cannot be so instantaneous as never to have furnished one single instance of a young one being taken of one, two, or three pounds' weight.

6. The peal and the truff being oviparous, if distinct species, as they are more numerous than the salmon, must produce a greater quantity of spawn, and being so much smaller than the salmon, cannot be destroyed by the spear. Yet no man living can prove that he ever saw such spawn either in a solitary or gregarious state; if they spawn at all it is in the river, and their young would then appear in shoals.

7. All river-fish coming within the *salmo* class, which are of an avowedly distinct species, towards winter get out of season; the females having roe, *ovaria*, and the males having milt or soft roe, *lactes*, and thus they get milky; when one is taken in the hand, even so late as January and February, a whitish liquor immediately flows from the male. Though a roe is often, but not always, seen in the peal and the truff, yet the male is never seen milky when the two fish are in a seasonable condition, if at any time—I never saw it at any time;—this shows the improbability of their spawning for want of the milter.

8. There are much greater differences in shape and form among salmon themselves, than appear between the peal, the truff, and the salmon. How frequently is it remarked, that such a fish is much finer grown and handsomer than another; some are short and thick, others long and lanky. Horses and other animals vary much in external appearances, but no one ever said that a white horse was

of a different species from a black one, or a handsome horse from an ugly one.

9. Sturt says, that the salmon smelts, about the beginning of June, begin to return into the rivers, being grown to twelve or sixteen inches in length. What can he mean, or what can this be, but the salmon-peal?

10. The salmon-peal is not described by any author entitled to credit, as a distinct species, or even described otherwise than incidentally as the young of the salmon.

11. There are always more smelts than peal, more peal than truff, more truff than salmon: thus exhibiting a regular series of diminution, which is a strong argument in favour of the hypothesis.

From these facts, the reader is left to draw his own conclusions; I do not claim for them the rank of positive proofs, but they are surely strong corroborative circumstances. Thus far, however, the evidence is all one way. I am now about to state a fact of an intermediate distinction, something more than presumptive, and yet, not absolutely positive. On the late breach in Totness weir, which happened exactly in the season when salmon ascend the rivers to spawn, the fish of course availed themselves of the opportunity. A greater number were speared that season than had been so taken for many years — of course a proportionate number escaped. I remarked to one of the fishermen on the Dart, who has been such from his boyhood, that we

should now see whether the destruction of the weir would increase the peal and the truff; the man replied, "It had nothing to do with it, because the three fish were all three different sorts." I did not attempt to convince him to the contrary, because I might just as well have reasoned with the fish itself; but merely replied, "We shall see." I have now a memorandum in my own writing, made just about the time the above conversation took place, in these words. "*The time will soon arrive when we shall ascertain whether the public stock has received any addition.*" Now it is a notorious fact, that for a great many years past, so many truff and salmon-peal have not been taken in the fish-locks at the Totness weir and the fulling-mill, *as have been taken in this season*; salmon-peal in particular. I cannot pretend to tell the number, but it has been immense. So much so, that I believe every one in the town who was before sceptical, *except a few*, are now satisfied, that the peal proceed from the pea of the salmon, and exclaim against the impolicy of taking so many thousands of *unsizeable* fish. This appears to me to be the obvious effect of as certain a cause; namely, that these peal proceeded from the salmon which escaped through the breach in the *weir* before-mentioned; others, however, will judge. But we are now arrived at the key-stone of this argument, namely, *positive facts* proved by *actual experiment*. If these do not satisfy the public, I hope it will satisfy the legislature, that the peal, the truff, and the salmon, are

one fish, at different stages of their growth; and that it will induce them not only to repeal the Dart act, but generally to provide for the more effectual preservation of this valuable fish.

12. And lastly: I copied what follows from the *Leeds Intelligencer* newspaper, of the 13th March, 1823. “The much-agitated question, whether “*whitings* or *herlings* are young salmon, or a distinct species of fish, seems to be set at rest by a “decisive and well-authenticated experiment. In “May, 1820, Mr. Ralph and Mr. Barnes marked “1465 fry, by taking off the dead fin, and returned “them to their native element. In the *ensuing* “season, many of them were recaptured as *whitings*; “in the *second*, as *sea-trout* and *gilse*; and on Tuesday night last, a *fine salmon* weighing ten pounds “so marked was caught at Stainton, and has “been seen by a great number of persons, and “it was exhibited at the public office on Wednesday; those who have maintained a contrary “doctrine, must now give up their opinion.”—*Carlisle Patriot*.

In consequence of seeing this paragraph, I wrote the following note to the editor of the *Leeds Intelligencer*: “As I am desirous of knowing every thing “that can be known upon this subject, I very much “wish, if I knew how, to have the words ‘*whitings*’ or “‘*herlings*’ defined or explained, because they are “local terms, and are totally unknown in this part “of the world; the terms that we give to these fish, “are, first, *salmon-fry* or *salmon-spawn*, called by

“ Linnæus smelts or smouls. In July or August, a
“ fish comes to us from the sea, which we call *salmon-*
“ *peal*, about twelve inches long, and from one-half
“ to three-fourths of a pound’s weight, exactly re-
“ sembling the salmon, except in size. In March,
“ April and May, we have the sea-trout or gilse, *sal-*
“ *mo trutta*, generally two pounds’ weight, so much
“ resembling the salmon, that great difference of opi-
“ nion has prevailed, whether the three fish are three
“ different species, or only one. After these, come
“ the salmon of various sizes. What I particularly
“ want to know is, whether these *whitings* or *her-*
“ *lings* answer to our salmon-peal.” This letter was
published likewise in the *Carlisle Patriot*, and
soon after I received a satisfactory, and circum-
stantial answer from a respectable gentleman of
Carlisle, saying, *inter alia*, “ I have all my life
“ paid great attention to the subject, and tried
“ many experiments in a more substantial way than
“ was done by Messrs. Ralph and Barnes in the
“ river Eden in 1820, though that alone was suffi-
“ cient to have convinced even a sceptic, that whit-
“ ings or herlings become salmon, and are the
“ same genus of fish that you term salmon-peal.
“ They are fry or smelts in May, when they leave
“ us and go to the Solway Frith. About the mid-
“ dle of July they return again into our rivers,
“ about ten or twelve inches in length ; from this
“ state they become sea-trout and gilse, and in the
“ following summer or autumn, salmon, from ten
“ to near twenty pounds’ weight.”

This gentleman speaks of the immense number of 882,000 fish caught in seventy days, as one of the great causes of the ruin of the salmon fisheries in the North. He further adds, “ From the experiments I “ have tried from the month of May 1812, nearly to “ the present time, compared with those of Messrs. “ Ralph and Barnes, that question is now nearly at “ rest in this country. I have tried various expe- “ riments with *fry* and *whittings*, or *salmon-pearl*, “ for several years, to ascertain whether or no “ they become salmon, and by what stages, from “ which, I am now perfectly satisfied, that they do “ become salmon, in the course of two years, or “ thereabouts; for in the month of May 1812, I “ put a great number of salmon fry into a bleachfind “ basin on the river at Milbeck, near Carlisle, which “ now supplies our canal to the sea with water. *In “ the latter end of that year, those FRY became toler- “ ably well-sized WHITINGS, and measured thirteen “ inches in length; and in the following season became “ SEA-TROUT, small gilse, and one of them continued “ in the basin until it was twenty-six inches and a “ quarter in length.* On the 16th of August 1813, “ I put twelve whittings into the same basin, first “ cutting the dead fin off the back to distinguish “ them from the fry, and on the 3d of June, 1814, “ I had the pond drawn with a small net, and “ upwards of twenty fish taken to the shore in the “ presence of scores of fishermen and others, when “ it appeared to all present, *that the whittings and “ many of the fry put in, in May 1812, had fairly*

“ *become sea-trouts, and some of them fork-tailed,*
“ *resembling a small gilse* ; several of the fish con-
“ tinued in the pond for two or three years after-
“ wards, and actually spawned, but the Bleachy
“ having failed and gone into Lancashire, the
“ banks which confined them were broken by idle
“ persons, and the fish escaped into the Eden.
“ Whether this experiment may satisfy the people
“ in Devon, I know not, but at present we are pretty
“ well convinced here as to what whiting or sal-
“ mon-peal are ; in fact, *they become salmon.*

“ In the year 1819, a number of whittings were
“ marked at King Garth on Eden, by cutting off
“ the dead fin, and sloping their tails, and on the
“ 27th of July, 1820, one of them was again taken
“ there *a large gilse*, weighing nine pounds.

“ The names given to *whittings* or *salmon-peal* are
“ various throughout the kingdom: at Berwick they
“ are called *sprints* ; at Dumfries, Annan, and the
“ south of Scotland, *herlings* (from yearlings) ; in
“ Dorsetshire, *skerlings* or *lastsprings* ; at Montrose,
“ Aberdeen, Banff, &c. *blacknebs* ; in many of the
“ old Scottish statutes, *smolts*, in contradistinction
“ to salmon-fry or smelts ; at Carlisle and in Cum-
“ berland, *whittings* ; in Lancaster, *smouls* ; in
“ Devon, *salmon-peal* ; and in almost every other
“ county and river by a different name.”

I think nothing need be added after this to
prove that the salmon-fry first come to the peal,
then to the sea-trout, then to gilse, or young sal-
mon, and finally, to salmon themselves ; we may say

upon this, as has been energetically said upon another more serious subject, "He that will not believe Moses and the Prophets, would not believe though one were to rise from the dead." This then closes the affirmative evidence ; now let us examine with candour what the reasons of those are who maintain a contrary opinion, namely, that they are three distinct species.

As to the salmon-peal, as far as I can collect, the advocates for the opinion that this fish is a species of itself, have three arguments ; the first is, that many of the peal have roe ; secondly, that they have teeth in the roof of the mouth, which the salmon have not ; and thirdly, that they never grow after they enter the rivers.

In answer to the first, I admit the fact, though it is not general ; and if some of the female peal have roe, I have never heard or met with an instance of a milt being seen in the male. But I think this is a circumstance which amounts to nothing towards evidence of a distinct species, because it is plainly an inceptive ovaria of a limited and very puny nature, not calculated for being shed in a state of maturity but at a very remote future time. Besides, who knows at what period of life these ovaria were first formed, and placed in the body of the fish ? perhaps coevally with its very existence, though not discernible but by a glass. Now it is known that fish begin to breed at an eighth part of their size : a small trout, not larger than a finger, has roe, and so has one as large as a man's

arm ; a trout is a fish that no one can mistake. But if the peal breed, is it not wonderful and unaccountable that their spawn were never seen, when we can see, and are well acquainted with, the spawn of the very smallest of other fish ? I think then that such roe in the peal is not even presumptive of a separate species, but that it increases and grows with the fish until it is fit to be shed in a state of maturity at a future time. A great deal more might be said upon this point, but it is not necessary after the positive facts before stated.

I answer to the second argument, that the peal have teeth in the roof of the mouth, that so have sea-trout ; but I have a very long and satisfactory paper also from Carlisle, proving that when the fish get to three or four pounds' weight, they all lose their teeth. In general salmon have them not. I examined one this day which had no such teeth, but the head of another fine salmon was brought to me a few days since which had such teeth ; so there is then no other conclusion to be drawn from this circumstance, than that generally when they are young they have such teeth, and when they get older they shed them ; but the instance I have just mentioned proves that there are exceptions.

In answer to the third argument, supposing it to be true, that the salmon-peal never increase in size in the rivers, it proves nothing either one way or the other. But how does it appear to be true ? No one has ever proved this to be the fact, nor is it to be proved, unless the fish be marked and identified ;

this has never been done ; therefore, there is no evidence of the truth of the assertion. But even if it be true, it is not to be wondered at ; because it cannot be expected but that a fish, shut up in a fish-lock, deprived of necessary food, and natural liberty, should fret, pine, and fall short of its natural growth.

These circumstances do not appear to me to weigh much against what is placed in the opposite scale.

As to the *salmo trutta* or sea-trout, this fish has certainly always been considered as a separate species. Authors of the highest authority so treat it, and give a description of the fish different from that of the salmon ; but I have several times examined the two, side by side, with the greatest nicety and attention, and have not been able to discover the slightest distinction in any external character. I think indeed, I would defy any man living to do it. The description given of it exactly corresponds with the description of the salmon. The spots, lateral lines, the sides, the belly, the tail, particularly, which is represented to be broader than that of the salmon, *is not so*. The fins and the rays are uniform ; and in addition to what Pennant says, both fish have quadruple branchia ; in fact, the fish were exactly alike in every particular. I have compared a great many at different times. It does not appear that Mr. Pennant formed his opinion on any experiment, but merely by observation on a single fish. Suppose a man were to do this on the larva of a butterfly, and did not by experiment substantiate the

transformation, could any one believe, that the caterpillar, the aurelia, and the butterfly were one creature? All the opinions of naturalists which I have seen, rest wholly on observation on external marks, and some other trivial distinctions, than which nothing can be more fallacious throughout nature, particularly between the male and the female of birds and of fish. They give no other reasons — no kind of proof by experiment — no positive fact, or any series of reasoning, or comparison of analogy, by which we can come to a satisfactory and decisive conclusion that the fish are different. Opinions which are not formed of sound and solid materials, fact and reason, are like a vapour, they carry conviction not beyond “the whistling of a name.” A truth proved by such experiments as those of my Carlisle correspondent, is worth all the loose and hasty opinions and assertions of all the naturalists in the universe.

“Pride often guides the author’s pen,
Books as affected are as men.”

To find out truths, we must go to facts and experiments. Recollect what that sublime writer, Buffon, says of the change of an ox’s horns, continued through three editions of his “Natural History.” Let it prove to us, that we should be cautious how we repose implicit confidence in the *dicta* of any man. Facts, then, are of much more consequence than the names of authors. I have seen and know so many instances of naturalists

being wrong, that I would take nothing for granted. An universal zoology is more than any man can accomplish of his own knowledge, and three parts of what is published are taken from the reports and the credit of others.

It is not easy to ascertain, either the sincerity or the correctness of an opinion. It may be extending this article, perhaps, further than is necessary, but whilst we are upon the subject, a page or two more may be pardoned. By analogy to other animals, we may see how ill-calculated external appearances alone are, without referring to other circumstances, to distinguish one species from another. In birds in particular this is the case, where the cocks and hens vary so much in plumage, that were they not reared from the same nest, and had we no other positive evidence, no man living would believe that they were of one and the same sort; but simple experiments in this way, prove the fact beyond a doubt. It is by experiment, that we know the cock and hen sparrow-hawk, the cock and hen kestrel, varying so much in size and plumage, and a great variety of other kinds, both wild and domestic, which it might be deemed pedantry to mention in this place, to be the same species. Every writer treats the ringtail, and the white falcon as *two* species (what we call the hen-harrier or furze kite), but from nestlings I know them to be one species. I shall stop short in the investigation of this very favourite subject, my fondness for which might carry me into an unreasonable length, by conclud-

ing, that if fish are to be pronounced of different species, merely by slight marks, spots, and bodily distinctions, though agreeing in all material points, it seems to me to be fixing opinion on a slender and treacherous foundation, when there are other facts and circumstances of infinitely more importance, and much better calculated to lead us to truth.

Whether salmon-peal are young salmon, or are not, has been a long-agitated question, and, as far as concerns merely public curiosity or natural history, perhaps it is a matter of no great consequence; but, as it concerns the welfare of the salmon fisheries, it is a matter of first rate magnitude; for, as has been frequently observed already, if they are so, (and that they are, I should think there cannot be a doubt in the mind of any unprejudiced and disinterested person,) they are then unsizeable fish, and ought not to be taken. It is evident to me that they were so considered in the reign of Queen Elizabeth, when the mesh of the net was fixed at two inches and a half broad to enable them to escape; and there is nothing in the case to induce a contrary opinion. The capture of salmon-peal, then, is an incalculable injury to the salmon fishery, and it ought to be prohibited.

I do not detail the many other comparisons which I have made with a great number of sea-trout and salmon. I shall only observe, that I have made such, and that they all terminated in the same result — an exact similitude.

The mesh of the net was fixed by the ministers of Queen Elizabeth, and great consideration should be paid to what was done by those giant-minded men, before any thing is lopped off from the act of the fifty-eighth of her reign.

ON THE PAIRING OF SALMON.

THOSE who do not feel a particular interest in pursuits of this sort, may, perhaps, think that this is carrying the subject more into detail, than necessity requires; but others, who are as partial to it as I am, will agree that “even the very dregs are sweet.” I should not, however, advance a word more on this topic, if it did not give me an opportunity of applying a few additional observations to the general question. It is material to know, whether salmon pair or are polygamous; inasmuch as, *if they do pair*, a very pernicious habit is practised, *in allowing only an unseasonable female*, or one very big with roe, to escape, *and reserving the male for destruction*, because the one cannot produce a progeny without the assistance of the other. I have seen this practised many times at the Totness fish-lock; that is, I have seen the female taken out and put into the fresh water above, and I have seen the kipper knocked on the head; if they pair, this is a most ruinous practice, and therefore it is very material to ascertain, if we are able, whether they do pair or do not.

No fact is mentioned by any naturalist — no experiment has ever been tried — no series of

analogical reasoning has been attempted, to decide this point either one way or the other : but the opinion that they do pair, rests merely upon general assertion and general belief. I do not profess myself able to determine this question ; but I may be the means of inducing others to attempt it. We want facts, ascertained by experiments ; and as far as experiments can avail, they should be tried. In the Encyclopædias we are told, that after the milter has done his natural office, the fish hasten to the sea before winter, “ *both the milter and the spawner.*” Sturt says, the male and female join in the selection of a place to deposit their young, but this hardly comes up to the idea of pairing : it however, induces an opinion that they do pair ; and there is evidence, notwithstanding what Goldsmith says, whose authority, as a naturalist, I admit not to be conclusive, that such natural office is performed *after* exclusion of the ovaria. Therefore, if they pair, nothing can be more injurious to the fisheries, than to kill the male, and to leave the poor female to propagate by her own means. It is consequently, a most important point to establish.

There seems to be no rule in nature, by which we can comprehend why some animals should pair, and why others should not. Without taking any notice of the human species, we will just examine the nature of quadrupeds and birds on their individual attachments to each other. With regard to the former, I think it is said, that the roebuck pairs, as does

also the rabbit. I recollect no other quadruped, wild or tame, that does so; at least, if a few do, by far the greater part do not. With regard to the latter, the case is very different; the laws of nature, hidden as they are from us, appear to be capricious and confused; but we must say with the poet,

“ All discord’s harmony not understood,”

and proceed to view her stupendous operations as they are, with admiration and with gratitude. It appears to me, that most of those birds, whose young depend upon the joint efforts of the male and female for support, and which build nests, do all pair, whether of the rapacious, or the pye kind, or any of the numerous species of the small bird race; and I believe this is mostly the case with the wild aquatic birds. The wild swan, goose, and duck pair; but all three, in a state of servitude, are polygamous, though they all proceed from the wild stock. The partridge pairs, but the quail, which so strongly resembles it, does not; nor does the pheasant, or the cuckoo; but the heron pairs, and yet the bittern does not. On the present occasion, there is no use in extending this enquiry; because the instances mentioned are sufficient to show, that nature does not furnish us with any rules by which we can reason, from the natural propensities of one object of the creation to those of another, why some should pair, and why others should not; nor do I recollect that any reasons are assigned or even

guessed at by naturalists, to account for this difference in animals. As to fish in general, from the very nature of the element in which they exist, their habits are concealed from the observation and examination of the philosopher ; and it may be very difficult to ascertain, not only, whether they pair, but what many other of their natural practices are. We need only recollect the wide and wonderful distinctions between the cetaceous and cartilaginous kinds ; yet is it unknown, I believe, whether any of them pair, and difficult to assign any other than a vague conjecture, whether the fact be so or not. Analogy, as we see, gives us no aid ; it is *thought* by some naturalists that the whale pairs, but what is this as evidence in matters of fact ? there is no proof that they do ; but even should *they* do it, as nature is so sportive, we can hardly say that the mammalia class of fish *are likely* to pair. I do not recollect that Scoresby, who gives the most particular and the best authenticated account of the whale, and other animal productions of the north, says that they pair. There are, however, some facts, that we do know, namely, that certain fish copulate like land animals, *more humano*, — the ray in particular, the male and female having been taken in a state of union, though they are oviparous. We know that all fish of the mammalia class have organs of generation like land animals ; but we also know, that the more immediate object of the present enquiry has no such organ of connection ; their amours have been oftentimes seen from particular situations ;

the impregnation of the roe takes place after exclusion; and this seems reasonable, considering the immense number produced from one female, amounting, as I have stated before, to about 600,000. It appears indeed almost impossible, that so large and compact a mass can be impregnated in the body of the female, the male having no organ with which to do it; and no part of the roe can be impregnated without an actual contact with the *seminalis masculinum*, either before or after exclusion. As the male has been seen to cover the pit which has been dug for the female, and the water has been observed to be immediately coloured, the probability is, that the natural office of the male is performed on the ovaria, whilst they are extended on a flat surface on the sand, and when every egg is so placed as to be able to receive the masculine influence. Nor is it at all improbable that the female should make a second and a third, or more beds, for the reception of the whole of the pea, which it is hardly possible or likely that she can discharge at one time or at one place, for the operation takes a considerable time in performing. I am warranted in this conclusion from what follows—we must make a comparison to something: taking it as a *datum* that the roe consists of 600,000 pea, now, as the natural orifice is small, only one pea can be emitted at a time, and these must be adjusted and deposited in proper and regular order and situations. They are not let out of her body all at once, as at a sluice, in a promiscuous, irregu-

lar, and confused heap. What pain the animal suffers, or whether she suffers any in thus laying her eggs, no one can tell ; but it is likely that some *exertion* is required, and any such exertion must occupy a small portion of time. I remember some time back, watching the whole progress of the caterpillar (*phalæna wavaria*), which destroys the gooseberry leaves. I saw the fly lay her eggs, about a dozen, on the inside of a leaf; she appeared to exert herself exceedingly, and there was an interval of, at least, a minute or more between the production of every egg, and she left the leaf before she had disposed of a fiftieth part of her burthen, to place the remainder on other leaves, well knowing that she ought not to fix more young on one leaf, than that leaf, after they were hatched, could support. There was also an *instinctive* method in placing the eggs, which was always on the rib of the leaf. I say instinctive, because they are all disposed after the same manner, as I have seen by thousands of them. Now, suppose the salmon were to occupy a minute in thus systematically and regularly dropping every pea. Perhaps no one would think this an unreasonable supposition ; but before we accede to this, let us pause for a moment, and look at the consequence. Why she would then be ten thousand hours, or four hundred and sixteen days in the accomplishment of her labour, without allowing one moment for rest or food. This, then, is absolutely and self-evidently impossible, without the aid of proof or the necessity of

argument. We will then allow a pea for every second: this must be rapid work; but at this rate she will be in close occupation, without appropriating a moment to any other purpose, six days, twenty-two hours and forty seconds. Now it is impossible for any one to imagine, that the fish can maintain a stationary position, even for above seven days; but rather that she must have intervals of rest, and must make many pits to deposit her pea in. Then it is reasonable to suppose, if this be the case, which is highly probable, that the male performs his office after exclusion; and that the fish, like the fly, does not place more eggs in one situation than can be fecundated by the male, and secured by them both. Even if she is confined only twenty-four hours in one place, and that in shallow water, where she is the whole time *visible, only let it be considered how much she must be exposed to the eagle eye of the practised spearer*, who feels as little mercy as the steel with which this valuable creature is transfixed. They never let the fish rest, morning, noon, or night; gangs of them are perpetually in motion, on each side of a river; if a fish is once seen, or started, certain death awaits him. He is hunted from pool to pool, from side to side, until, wearied out, he deems himself safe if he can hide his head, and he is dead in a moment. How important a circumstance it is, that the fish should not be disturbed whilst laying her eggs, is obvious, for if such eggs are not well covered up

and secured, they are sure to be destroyed by other fish.

I once accidentally saw a large salmon speared on the river Avon in the very act of spawning; it was, as I know from circumstances, in the month of November. When she was taken out of the water I observed the roe to drop from her one by one at intervals of about a second of time, or rather perhaps a second and a half.

As the kipper is in close attendance for the purpose of impregnation, and also for securing the roe in the pit or bed by filling it with sand, it is certainly probable that they pair. If there is no kipper the eggs must be abortive. Should they pair it is the worst of policy, according to the common practice, to cut off that which causes the increase. There is, however, much to be said on the other side of the question, which we shall presently examine. But whether *they do pair, or whether they do not, this enquiry, founded upon facts, shows the importance of allowing ample time in the breeding season to these fish, and that they should not be molested or frightened from place to place at this critical juncture*, when all should be quietness and privacy. The pit which the salmon digs in the sand, is as it were her nest, and there is every reason to suppose that, like birds, she will forsake her nest if disturbed in it; this is a further proof of the enormous and incalculable injury sustained by the public from this cursed and cruel system, which, as it cuts up the brood by the roots, should be speedily,

as it might be easily, put a stop to. It should also be recollected that *every salmon* does and must in the spawning season go high up the rivers to spawn, therefore *every salmon* is within the reach of the spear; consequently, if not protected from this deadly weapon, *every salmon* is likely to perish. Much irregularity proceeds from this crime (*a mala prohibita*, at least), such as idleness, night-walking, drunkenness, and all the train of vices which the poaching system produces and confirms. To exemplify still further the nature and extent of this mischievous abuse, it is necessary to observe that the salmon cannot spawn at any place they please; there are mills on some rivers which do not afford a convenient situation for them; it must be in undisturbed beds of sand of a particular quality and fineness, generally such as is thrown back into an eddy or whirl at the bottom of a rapid; the stream must also be of a certain velocity; if too violent the spawn pits are apt to be uncovered, and the whole pea to fall a sacrifice to trout and other fish which are ravenous after it. The sand must also be so deep as to admit of a pit of eighteen inches. On the other hand the fish equally avoid still water, no doubt for some good reason, though to us it is only known that a running stream is necessary to fecundate the ova. As the fish then seek only *certain places*, where what is called their *works* are plainly discernible, (for when *fresh works* are observed, the fish are not far off,) those who understand this system of

water-poaching have only to secrete themselves and wait their approach. These retreats or sand beds are called restoffs; and if the spearers cannot otherwise hide themselves, they stick old furze bushes and other things in the sand, behind which they place themselves and wait their opportunity. All the fish must make towards these sand beds, which are always in shallow water, for a certain degree of the sun's influence is as necessary as the water to fructify the pea. They can spawn nowhere but in these places. At night a *white* board or painted stone is placed at the bottom of the stream, and the fish, attracted by lights, are drawn to the spots where the boards or stones are placed; the opaque body of the salmon, though in the dark, is easily seen on the white board, and of course as easily and fatally struck with the spear. Thus, taking into consideration all the abominable contrivances which are practised to exterminate this fish, the wonder is that a single one should escape death, and not that they should be so scarce and dear as the public justly complain of finding them.

It may be further alleged that if the impregnation takes place *after* exclusion and not *before*, and if they do not pair, the male would not follow the female to her breeding haunts to assist in digging the pit and preserving the pea; but this, though a probability, is no certain proof of the position, because the attachment of all animals *which pair* is actuated and governed by other considerations

than the gratification of the sensual appetite: it is social, individual, and, as it were, sentimental; with the crow it is said to be for life, the cock and hen never separating, but when either loses his mate the survivor enters upon perpetual celibacy.

There is so obvious a difference between the male and female salmon even in the water by day, independent of the shape and colour, that the pregnant big-bellied female can never be mistaken for the male.

Again it may be thought that the powers of *one* male fish can hardly be equal to the fecundation of such a mass of roe as 600,000; to this it may be replied that Nature is as equal to the perfection and accomplishment of all her works as she is wise, and in many particulars incomprehensible to us; in this case the wonderful wisdom of the Creator is shown in a most miraculous degree; the organic moving particles (the supposed source, at least assistant, of impregnation) in the milt of a male fish is about seventeen times the number of ovaria in the female; the female codfish has upwards of nine million pea; the milt of the male, according to Leuwenhoek, contains 150,000 millions of living particles; estimating the salmon, then, after the same ratio, if the roe contains 600,000 pea, the milt will contain 5,400,000, which is a vast superfluity beyond what is necessary for the purposes of nature, and serves as a resource against all accidents and waste.

Yet to show how difficult it is to ascertain whether these fish actually pair or not, I have been made acquainted with the following fact. A spearer, last autumn, standing in about three feet of water, secreted behind the artificial fence before described, saw a female at work, that is, grubbing up a pit in the sand for her pea. Experience told him that the male, to use the very language in which the anecdote was related to me, like dogs after a bitch, would soon follow her. He was not disappointed, for this man speared seventeen males in one day, and another man speared eleven on the same day at the same place; and then, with sterling genuine human gratitude, which is said to be "a vice peculiar to human nature," they speared their benefactress also. I have not the smallest doubt of the truth of this story as to the destructive part of it, because I have been told the names of the men engaged in it; but, subject to what has been just observed, and to what others may know upon the subject, I must leave the public to determine this question. It is not, however, certain that these male fish were after the same female, they might be in quest of others, and therefore it is no proof that they do not pair; certain, however, it is, that whether they pair or whether they do not, it is a most impolitic and injurious practice to spear the males and send away the females to procreate by themselves; and it is both cruel and brutal to spear them at all in the breed-

ing season, whether male or female. If they are polygamous the effect is the same, unless, as is the practice among gamekeepers with pheasants, it be thought necessary to kill a certain number of the males annually.

Another important fact arising out of this inquiry, is, that the female is a very considerable time in depositing her roe, during which she is exposed to the spearer, and therefore these spearers should be strictly watched, and severely punished when detected in the practice.

Should any one pronounce this a trifling subject, and complain that more has been said about it than there was any occasion for, which I dare say many ignorant and some malignant people will not fail to do, I answer, "that whatever God has judged worthy of himself to create, is not below us to examine and consider; the same hand that formed the whale, the elephant, and the lion, has likewise made the louse, the gnat, and the flea. Innocently to amuse the imagination in this dream of life, is wisdom; and nothing is useless that, by furnishing mental employment, keeps us for a while in oblivion of those stronger appetites that lead to evil."

I now quit the elementary part of this subject for another, and I wish that in doing it I could use the apostrophe of Junius to Lord Camden; but that cannot be, for in truth the change is only travelling from one "barren waste" to another. However, he that is whole needs not a physician,

but he that is sick : it is because no “verdure quickens,” that we desire to fertilize the soil. If we can suggest such improvements as may make it productive, the fruit will amply repay the labor ; and with the hope of so doing, though certainly in an inferior ratio to that of the desire, we proceed to the next topic.

ON THE CHANNEL-FISHERIES ON THE COAST OF
DEVON AND CORNWALL.

THE defects and abuses of the law with regard to the channel-fisheries are as detrimental to the public interest as are those which we have just examined on a similar subject. I will adopt the same mode of enquiry as has been pursued with regard to the salmon-fisheries: — endeavouring to point out where the defects lie — how the laws are abused — and in what respect they ought to be amended. A very few prefatory observations will, however, be necessary.

It is well known that all sea-fish deposit their roe in creeks, bays, and shallow water, near the shore; because a certain, though a very small degree of the sun's vivifying power is absolutely necessary to bring such roe to maturity. This is not only a truth established by the observation and experiments of scientific men, but we have legislative authority in its behalf. By the 3 Jac. I. c. 12. entitled, An Act for the better Preservation of Sea-fish, it is stated in the preamble, “Forasmuch as it is certainly known by daily experience, that the brood of sea-fish is spawned and lieth in still waters, where it may have to receive nourishment, and grow to perfection; and

“ that it is there destroyed by weirs, draw-nets, and
“ nets with canvass, or like engines in the middle or
“ bosom of them, in harbours, rivers, and creeks
“ within this realm, to the great damage and hurt of
“ fishermen and hindrance of the commonwealth;
“ for that every weir near the main sea, *taketh*
“ *in twelve hours sometimes the quantity of five*
“ *bushels, sometimes ten, sometimes twenty or thirty*
“ *bushels of the brood of sea-fish* ; and also those
“ which use draw-nets and nets with canvass, or
“ engines in the midst of them, do, every day
“ they fish, destroy the brood of all the sorts of fish
“ aforesaid in great multitudes, &c. &c.” Then follow the enactments of the statute, but which do not apply to my present purpose. I only mean to show, by the preamble, that the roe has always been considered to be deposited in shallow water on the coast. The act does not mention the size of the mesh of the net, but we shall have that more particularly hereafter.

Now by the statute 13 & 14 Car. II. c.28., after setting forth the importance of the fisheries, as far as concerns the wealth and safety of the realm, and the divers pernicious disorders and abuses by the licentiousness of the times which have crept in, and yet continue, evidently destructive of that trade ; it was enacted, that after a time therein mentioned, “ No person should
“ from the first of June to the last of November,
“ presume to take fish in the high sea, or in any
“ bay, pool, creek, or coast of or belonging to

“ Cornwall or Devon, with any drill net, trammel,
“ or stream-net or nets, or any other nets of that
“ sort or kind, *unless it were at the distance of one*
“ *league and a half at least from the respective*
“ *shores*, upon the penalty of forfeiture of the said
“ nets so employed, or the full value thereof, and
“ one month’s imprisonment without bail or main-
“ prize.”

I think that there can be little doubt, but that among “the divers pernicious disorders and abuses
“ crept in by the licentiousness of the times,” in contemplation of the legislature on the passing of this act, was the destruction of the young fry and brood of fish in the shallows, which made it necessary that these fishing trammel-nets or trawl-nets should keep a league and a half from the shore; instead of which, and in utter disregard of the act, they sweep the bays, shores, and creeks with their trawls, destroying every thing that comes into them, both great and small, old and young.

This is a very serious evil, and is one great cause of the scarcity of the best sorts of channel-fish; yet it is remediless as the law now stands, because no prosecution can be enforced under it but by an information at the suit of the King’s Attorney-General, where the expenses and difficulties are so great that no man will interfere. But great as this evil is, amuch greater one remains to be stated, for the 1 Geo. I. c. 28. entitled “An Act,” among other things, “for the Preservation of the Fry of Fish,” after reciting by the 4th sect. “that whereas of

“ late years the brood and fry of sea-fish has been
“ greatly prejudiced by the using of nets of too
“ small mesh, and by other illegal and unwarrant-
“ able practices, it is enacted, that after 1716, if
“ any person or persons shall use at sea upon the
“ coast of England, any trawl net, drag net, or
“ any net whatsoever, for the catching of any kind
“ of fish (except herrings, sprats, or lavidnian),
“ which hath any mesh or moke *of less than three*
“ *inches and half* at least from knot to knot, or which
“ hath any false or double bottom, end, or pouch,
“ or shall put any net or nets though of legal size,
“ or mesh, upon or behind the others *in order to*
“ *catch the small fish* which would have passed
“ through any single net of three inches and half
“ mesh, all and every such person and persons so
“ offending shall forfeit all and singular such net
“ or nets so used contrary to the true intent and
“ meaning thereof, and also £20 to be recovered
“ by distress, and in default of payment to be com-
“ mitted to the county gaol for a year, the penalty
“ to be divided between the informer and the poor,
“ and the nets to be burnt.” The seventh sect.
of the same act, “ for the further preservation of
“ the fry of fish,” makes it penal to take unsizeable
fish, and mentions the size under which fish ought
not to be taken.

Now, after such an explicit act as this, can it be
believed that these trawlers, I believe to the number
of 100 *from Brixham alone*, should fish with nets
in the bag of which the fish are caught and

suffocated; having a mesh so small as to take fish not larger than a sixpence; and that close upon the shore, where the young fry principally swarm, without the least regard to the law of the land, or to any one single thing but what they very injudiciously suppose to be their own private interest. From the smallness of the mesh the consequence is that the bag of the net is so completely choked with mud, sand, and sea-weed, that nothing but water can pass through. The effect of this pernicious practice must be so self-evident to every man's senses, as to require neither reasoning or proof to convince him of the national mischief that it must of necessity produce. Thousands of millions of young fish, and the roe of fish *of all the best qualities*, are thus destroyed, contrary to the intent of the present law, and for want of an effectual one to check the evils complained of.

About twenty years ago, curiosity alone induced me to go a little way to sea in a trawl-sloop, merely to see the operation of the trawl-net, and the mode of catching fish therein, without any reference to the law; for I then had thought nothing about it. After the net, which was extended upon a pole thirty feet long, had been at the bottom about half an hour, it was drawn up, and several fine fish were taken out. But when the bag of the net was emptied of all which it had collected at the bottom, *during half an hour upon a pole thirty feet long*, I could not refrain from expressing my astonishment at seeing its contents. To state any opinion upon

the quantity of young fry and eggs of all descriptions, sorts and sizes, thus destroyed, from the size of half-a-crown to that of sixpence, and thence to a pin's head, would be absurd. The mass appeared to be countless and incalculable ; and, exclusive of the quantity discernible by the naked eye, there must have been a still much greater quantity that would require the aid of the glass to identify it. However, after the fishermen had separated the *saleable* from the *unsaleable* fish, the latter being kept for their own private purposes, the useless dead mass of fry and pea was shovelled back into the sea, as food for gulls and other animals, instead of having been allowed to increase to its natural dimensions, and become food, rich and abundant, for our own support and enjoyment.

On making some enquiries on this subject of a very respectable gentleman of Brixham, he told me that he had seen a whole boat-load of little useless fish and fry of this description taken from the trawlers, and thrown into the sea. Now this trawl-net is thus drawn, upon an average, *ten* times a day, by *one hundred* vessels from *one* port. Let the public then reflect, and let a calculation be made, if possible, (but the details baffle all calculation) *what a destruction must be effected by the practice at large!* — a destruction contrary to sound policy, and contrary to the express letter and true intent and meaning of a salutary act of parliament. Though this national grievance is known to many, yet no man moves a finger to remedy so

crying an evil; — an evil which, without a cure, will in a few years destroy the little that remains of our channel fishery.

There is also a considerable difficulty to convict under the Act of George I. for taking unsizeable fish; and therefore it is so much evaded, as to be quite useless and inoperative. The avowed object of the Act, as stated in the preamble, is to preserve the fry of fish; — and yet the fry of fish are destroyed to the greatest extent. The spirit of the Act is violated in every part; and yet the innovators *commit no legal offence*. The words of the Act are, “*bring to shore, sell, offer to sell, or exchange.*” — The fishermen do neither; and yet they infringe upon the spirit, the true intent and meaning of the Act in every part. Such as are so small as not to be saleable, the fishermen keep and use themselves, for what they call *tea fish*. The fish that are so small as to be good for nothing, are thrown into the sea. So that they neither “*bring to shore, sell, offer to sell, or exchange them;*” and yet they violate the spirit of the Act in every respect. The interest of these fishermen would be much better promoted by attending to the beneficial and well-meaning provisions of this and the former Acts, than by using such destructive nets, and fishing in prohibited situations, which disturb the resorts of the old breeding fish, and are so detrimental to the young fry.

This appears to me to be an interesting and important subject, not only from the object of the

inquiry, as affecting almost every individual in the kingdom, but from the numerous instances in which the legislature has interposed ; though, from the foregoing observations, I conceive it must be universally admitted that there is urgent necessity for a further interposition. Another Act must pass to remedy the evils and supply the defects that have been stated, before we can entertain a reasonable hope of restoring the fisheries to that consequence and value, which they would possess if properly protected. I have with this view drawn out the form of an Act, which, if carried into a law, I believe would produce these effects, and render salmon and other fish on the coasts of Devon and Cornwall, as cheap and as plentiful as ever they were. If there is any thing therein advanced which is incorrect, or any thing omitted which it should contain, the error may be corrected and the defect may be supplied. I neither offer it or consider it as a piece of perfection, but it may assist in providing one that is so.

Form of a Bill to prevent the destruction of the shed or breed of salmon, and fish of the salmon kind ; and to prevent the improper taking and destruction of salmon and fish of the salmon kind, in all the rivers of England ; and also, to prevent the destruction of the fry of fish, and to prevent the taking of unsizable fish on the sea-coast of Devon and Cornwall.

Whereas a proper attention to the increase of the salmon fisheries in these realms, and to other

fisheries upon the sea coast of Devon and Cornwall, would be attended with very great public and private benefit ; but the laws now in force are very inadequate to the above purposes, being not sufficiently explicit, applicable, and severe, to prevent the illegal destruction of fish by the sundry means adopted and practised by poachers and other ill-disposed persons ; be it by this Bill therefore enacted, that the Act of the 58th of his late Majesty King George the Third, c. 43. and all other local Acts for particular rivers, be repealed, and the same from the passing of this Act are hereby declared to be repealed in every part thereof ; and be it further enacted, that the magistrates assembled in the county quarter sessions for every county in these realms of England, Scotland, and Wales, shall have power, and they are hereby authorized (first examining if they shall think proper such witnesses as may be necessary on the occasion) to put all rivers and branches of rivers in England, Scotland, and Wales, where salmon are taken, in defence for any time not exceeding one hundred and fifty days in each year *, and to vary the same, having respect to each particular river, and the time when salmon may be in season therein, according to cir-

* Perhaps it would be better for the Legislature to put all rivers in defence during the six winter months of the year, as no salmon ought to be caught but in the six summer months, beginning with April and ending with September ; and it would relieve the sessions from being pestered with applications by interested individuals to put different rivers in defence at different times of the year.

cumstances, and as they shall think proper ; during which time that such rivers shall be put in defence as aforesaid, it shall not be lawful for any person or persons whomsoever, to take, kill, or destroy any salmon, or salmon trout, or fish of the salmon kind, or any brood, shed, salmon, or fry of such fish, by net, coop, spear, or any other means or device whatsoever, or to keep down any gratings, or other obstructions at mills or other places, to prevent the free passage and repassage of such fish to and from the sea; and every person so offending shall for every such first offence forfeit and pay the sum of fifty pounds; for the second offence, the same penalty, and commitment to hard labour for three months; and for the third offence, felony* and transportation for seven years†; and every person purchasing such fish during such fence days, or having the same in part‡ or in whole, in his, her,

* This Act must be repealed in the first instance, as every part of it which ought to be preserved is included in the following Bill.

† Every man who fishes during the fence days, and after the same are proclaimed, must do it knowingly and wilfully; and therefore acts in open defiance of the law and the authority of the magistrates: yet such are the propensities of a certain description of people, that nothing but a very severe measure will put an end to the destructive practice of spearing salmon.

‡ As these poachers make a practice of dividing such salmon as they destroy, into *parts*, under an idea that no conviction can take place for possessing any thing less than a *whole* salmon, to avoid all doubt, it is proper to provide against this objection, though it has no foundation in justice, or perhaps in law, but I know it has in fact.

or their possession, shall forfeit and pay the sum of five pounds for every part or whole fish so found in possession of such person or persons.

And whereas it is necessary for the due and effectual execution of this Act, that conservators* or overseers be appointed in such numbers and at such places, and for such rivers and branches of rivers, as the said magistrates shall think proper, to see that the same and the provisions thereof are not violated; be it further enacted, that the magistrates aforesaid, for each respective county, shall have power, and they are hereby authorized to appoint as many conservators as they shall think proper for the several rivers and the branches thereof, in each respective county; who shall be sworn by any ma-

* Conservators or overseers were assigned, and to be sworn by the 13th Ed. IV. c. 47. whose duty it was in very general terms to inquire of offenders; and by 17 Richard II., c. 9. justices of the peace were to be conservators, and such justices were, by this statute, to survey and search all the weirs, *that they shall not be very strait* for the destruction of such fry and breed, but of reasonable wideness.

Here the office of conservator and the power of the magistrate with regard to weirs, are very lightly touched upon, but the power of either is by no means equal to a necessary remedy of the existing evil.—Still the magistrates are conservators, and may act as such, if they think proper.

It is requisite also that the conservators, as well as the justice, should not be liable to vexatious actions for trespasses, where no injury is committed. And there should be a greater number of conservators appointed; one is not sufficient for a large river, extending thirty or forty miles. It would be a very advantageous thing if the constables in every parish were to be sworn.

gistrate, or at any sessions, duly to execute the office of a conservator, that is, that he will kill no salmon, or breed of salmon, within the fence days aforesaid, or in any other manner contrary to the provisions of this Act by any means whatever, nor suffer others to do it, as far as he lawfully may or can; and that he will, to the best of his ability, judgment, and diligence, use all means to detect such as do, and will immediately give information thereof to some magistrate of such offender, and that he will view all rivers, rivulets, and branches thereof, within his district or place of appointment, and make an immediate report to some magistrate of all or any obstructions in such rivers, either by weirs, gratings, want of waste hutches, fenders in mill dams and streams, or any other unlawful means whatever, which may impede or prevent the passage and repassage of such salmon or salmon spawn, or shed or fish of the salmon kind, or any other unlawful device which may prejudice or injure the salmon fisheries.* And be it further enacted, that such conservator, though he inform against the violation of this Act, may nevertheless be allowed to give evidence before any magistrate, or in any court of sessions or law, and that such magistrates

* There is scarcely a river in the country where there are not some unlawful erections, prejudicial to the breed of salmon.—I have heard of several, where traps, as they are called, are placed directly across rivers, so as to catch every fish that goes up and down.—This question has already been much discussed.

may convict any offender against this Act on the oath of one credible witness. And be it further enacted, that either on the report of such conservator, or on the mere motion of the said magistrates, it shall be lawful for any three magistrates assembling and acting together, to take a view of such rivers and branches thereof, and if they find any impediments therein which prevent the free passage of such salmon and fish, such gratings at fish coops, or at mill leats, or any weir so constructed and without an escape for the salmon and fish, so as that such salmon and fish cannot pass and repass, or that any weir or fish coop or other device is so constructed as such magistrates shall deem and consider improper and injurious to such salmon fishery and fisheries, by not being passable and repassable, it shall and may be lawful for such magistrates to give notice in writing to the person or persons claiming such weir or other obstructions as aforesaid, to remove the same within one month from the delivery of such notice, and to amend such weir in such way with an escape therein, and to remove such obstructions* as will enable such salmon and

* In the preamble of the statute of 4th Anne, c. 21. which only relates to the rivers of Southampton and Wilts, it is stated that, "Whereas the owners or occupiers of the salmon fisheries regarding only their own *private and greedy profit* to destroy the stock of the fisheries, by preventing the breed of good fish to pass in season through their fishing wyres and fishing hatchways from the sea into the rivers to spawn, and by killing such as are under size, and by fishing continually out of season at and in the said fishing wyres and creekes of the

other fish to pass and repass, as such magistrates shall think proper, and in default of such amendment or removal, agreeable to such notice, that such magistrates will, and they are hereby authorized to amend, alter, and remove or abate, or order to be removed, altered, or abated, the same, without being answerable for any damages or consequences that may follow such amendment, alteration, removal, or abatement; and if such magistrates have any doubt as to the person or persons who may be the proprietors of such weirs or obstructions, that it shall be lawful for such magistrates to affix such written notice on any public place in the market town near such weir or obstruction, which shall be deemed and taken as effectual as if such notice had been delivered to such proprietor or proprietors.

And whereas, as it is truly expressed in the statute of the first of Elizabeth, “ That in divers
“ places they feed swine and dogs with the fry and
“ spawn of fish, and otherwise, lamentable and hor-
“ rible to be related, destroy the same, to the great
“ hindrance and decay of the commonwealth;” so

“ rivers with nets and other devices, whereby not only the
“ increase of the species of the said fish, but also the growth
“ thereof is in a great measure destroyed.”— This is exactly the fact throughout the kingdom, and I can see no reason why the other counties, particularly Devon, where there are such excellent and numerous rivers for the increase of the salmon fisheries, should not have the same benefits as are given to Southampton and Wilts by the statute of Anne.

the same practice, with more or less atrocity, continues to the present time; be it therefore further enacted, that whoever shall be convicted by the oath of one credible witness, of catching, taking, or destroying by any ways or means whatever (except angling with rod and line) any young salmon, shed, or spawn of salmon, in their passage down the rivers to the sea, shall forfeit and pay the sum of 20*l.* for the first offence, 50*l.* for the second offence, and commitment to hard labour; and for the third offence, the like penalty, whipping, and commitment to hard labour for one year. And if any miller or other persons having the command or controul of any mill-lead, fulling or tocking lead, paper-mill or other lead, or artificial stream of any denomination whatever, shall put or place, or cause to be put or placed, or continue so put or placed, any net or basket, or other thing, device or contrivance, having the effect of such net or basket, at his mill tail, or by the side thereof, or at any other place under any other name, that shall catch, take, or destroy, or have the effect of catching, taking, or destroying the said salmon, spawn, shed, or fry, shall forfeit and pay the sum of 100*l.* for every offence; that is, for every time such net, basket, or other thing, shall be so used.— And be it further enacted, that such magistrates shall order all such nets, baskets, or other things, contrivances or devices for the purposes aforesaid, to be immediately removed, abated and destroyed.—And, that there shall be, and in case that there

is not, that three magistrates shall have the power to order or cause to be ordered or made, a waste fender or outlet, for the salmon spawn or shed in the season, when they descend into such mill-leats, to pass uninterrupted and uninjured into the beds of the rivers beneath, so that they may have free access to the sea.—And that it shall be lawful for any conservator to attend such mill-leats in the season when the salmon spawn or shed descend the rivers, and to draw such waste fenders three hours a day, that is, one hour at a time, to let and suffer such spawn to pass and escape from such mill-leats.—And be it further enacted, that all owners and occupiers of corn, fulling, paper, and other mills, (and all other places where there be fenders) shall constantly keep open one shutter, or small hole * of a foot square, in the waste hatch, or water-course, in the direct stream, for salmon to pass and repass at all seasons of the year, and suffer such fish to pass and repass without being taken or injured, under the penalty of 20*l*. And such miller or other persons shall, during the salmon spawning season aforesaid, every night, at least six hours, draw such waste fender, so that all such spawn or shed, as well as the back salmon or spent fish, may pass into the open river beneath, and

* By the statute of Ann, this waste fender is expressly ordered to be of a foot square ; but then, as is before observed, it only applies to Southampton and Wilts—perhaps every one will think it should be made general.

from thence into the sea.—And be it further enacted, that all millers and others using mills of any description shall place stakes or gratings before the channel leading to their several mill-wheels of the closeness of one inch, in order to prevent the back fish and spent salmon from getting under mill-wheels and being crushed to death, which is a circumstance that often happens for want of such grating, to the great detriment of the public interest. And any magistrate is hereby empowered to order such gratings to be put down as aforesaid, and the party neglecting so to do, after such order, shall forfeit and pay the sum of 5*l.*, and shall repair the same from time to time, as it becomes necessary. And such magistrates shall, if they think proper, also order * gratings to be put and placed at the commencement of every mill-leat; or where the same branches off from any natural stream, or at any other more convenient situation, a grating of the closeness of one inch, for the purpose of preventing the back, old, or spent fish, from passing into such mill-leat; and shall order a waste scuttle or hutch of a foot square to be constantly kept

* I am credibly informed, that on all the small streams every back fish is destroyed—*that not one escapes*. This is principally owing to a want of gratings to keep the fish from the mill-leats. A few may escape if they keep to the rivers; but if they get into the mill-leats, *it is impossible*. The fish hunters are as expert in finding a salmon, as the poachers are in finding a hare; and, if a fish is once discovered, he is certainly killed.

open to enable such fish to escape into the natural stream, except at such times as there may be a scarcity of water, for the use of such mills, when such magistrates shall have power, and they are hereby authorised to order such scuttle or hutch to be shut up, or kept open, when and for so many hours per day as they shall think proper.

And whereas a most wicked, detrimental, and malicious * practice is often used, for the purpose of destroying fish, not only salmon, but every other kind of fresh-water fish, by hot or quick lime, and other deleterious drugs and materials, but more particularly by quick lime, which when slaked in water is well known to destroy every species of fish ;—be it therefore enacted, that if any person or persons shall wilfully throw, put, or place any such quick lime into any river for the purpose aforesaid, he, she, or they shall be guilty of felony, and transported for seven years ; and if any other filth, material, or dung, green lint, or flax, the letting off water impregnated therewith, or any other thing whatever which shall be deemed prejudicial to the said fisheries, the same shall be considered as a public nuisance, and indicted, abated, or punished by fine and imprisonment, according to the discretion of the sessions, and to the degree and nature of the offence.

* If this were ever practised it would be a crime deserving the most severe punishment. Whether practised or not it may as well be provided against.

And whereas sundry idle and disorderly persons, in defiance of all law and the authority of the civil magistrate, make a practice of destroying salmon by night * chiefly in the winter season, and during the fence days, and when they are unseasonable and unwholesome, by various arts and devices, but principally by spears, first attracting the salmon by means of lights and fires to certain spots convenient for their purposes, where a large white stone or board painted white is placed at the bottom, and when part of such stone or board is covered by a salmon drawn thither by the said light, which is easily perceived, such salmon is struck by a barbed spear and caught, or destroyed;—be it therefore enacted, that if any person or persons shall be detected in hunting or searching for, injuring, killing, or attempting to injure, or kill, with the spear, as aforesaid, any salmon during the fence days

* It is a perfectly well known fact, that not only salmon, but other fish, can be attracted to particular spots at night by lights, and can be more numerous and effectually destroyed by night than by day, as I have been assured by a very experienced sportsman at this sort of work; by day the fish can see and hide himself from his pursuer, but by night he is allured to his own destruction by the light. As there is also a much greater difficulty in detecting the offender in his nocturnal depredations than if he acted in open day, the salmon should be put under the protection of the law, by an extraordinary severity of punishment, upon the same principle as goods, wares, and merchandise exposed by night, are protected by law, because they cannot be protected by their owners.—Light has the same effect upon sea-fish as it has upon the river fish.

aforesaid, *by night*,* that is, after sun set and before sun rise, he, she, or they shall be guilty of felony, and subject to transportation for seven years, committed accordingly without bail or main-prize ; and if any person or persons shall strike at, or kill any salmon, with a spear, *by night or day* at any other season of the year than the fence days, or by *day* during the fence days, shall forfeit and pay the sum of 50*l.* ; and for the second and third offences as before.—And be it further enacted, that on information being given to any magistrate by a conservator or other, of any person or persons whomsoever, having in his, her, or their possession, unseasonable salmon, or any salmon caught during such time as the rivers shall be in defence, or parts of such salmon, it shall be lawful for any magistrate to grant a warrant or warrants to search the house and premises of such suspected person, and to seize and take all unseasonable fish, and parts of fish, whether salmon or trough, and the person or persons in whose possession, house or premises, the same shall be found (the same having been placed there with their knowledge and permission) shall forfeit and pay the sum of 20*l.* And if any doubt or question shall arise, as to the unseason-

* To such extent is this practice of spearing by night carried, that nothing but a very strong measure will put an end to it. I have been informed that there is a gang of fourteen fellows in one parish, convenient for this work, who do nothing else, and with the most horrid imprecations threaten the life of any man who interferes with them.

ableness of such fish, or the lawful property or possession thereof, it is hereby declared that all such salmon shall be deemed and considered unseasonable and unsizeable, unless the person or persons in whose possession such salmon or parts of salmon are found, can prove that he or they came lawfully by the same, and particularly not by spearing.

And it shall be in like manner also lawful for any conservator to search for and seize all such spears as are calculated for, or used for, the destruction of Salmon, commonly called Salmon spears; and any person or persons in whose possession or on whose person such spear shall be found, shall forfeit and pay the sum of ten pounds (whether the manufacturer of such spear or any other); it being the practice of such Salmon poachers, in order to avoid suspicion, to carry the spear in their pockets, and to cut down a young tree or sapling for a pole to screw into such spear, as soon as they discover a Salmon. And that it shall be lawful for any conservator to search any suspected character, prowling about * by the banks of rivers, for such spears and seize the same. And further, that if any person or persons shall be detected during the fence days by the side or bank of any river, or near thereunto, or in the neighbourhood thereof by *night*,

* It is impossible to detect the night poachers without such a power, and unless this night work is put an end to, neither this act nor any other will effect that public good which it otherwise might.

that is, between sun set and sun rise, with lanthorn or lanthorns, having a light therein, or other fire or fires, for the purpose of attracting or decoying salmon contrary to the true intent and meaning of this act, he, she, or they may be seized, and shall be committed to the gaol of the county where detected or taken, without bail or mainprize. And on conviction of the offender or offenders last aforesaid (having regard to the character of such offender or offenders) by the magistrates aforesaid in session assembled, he, she, or they shall be transported for seven years beyond the seas. And it shall be lawful for any magistrate, on information of the offence aforesaid, to issue his warrant for the apprehension of such offender or offenders. And it shall and may be lawful for any person or persons whomsoever without warrant, to seize and detain, and carry before a magistrate, any person or persons using such lights by night, at suspicious places by rivers, for the destruction of salmon as last aforesaid, or any other suspicious character, and take them before a magistrate to be dealt with according to the provisions of this act.

And whereas after the fence days are expired, and the season commences for taking salmon and other fish of the salmon kind, it frequently happens and cannot be avoided that unseasonable fish commonly called old, back, or spent fish (as well male as female) being fish that have spawned with their keepers, are taken in nets; but as such unseasonable fish are unwholesome food until they have

been into and returned from the sea,—be it enacted, that all such old salmon shall be immediately liberated as soon as taken from such nets, and put back into the open river without being killed or injured. And any person or persons having such old fish in his, her, or their possession, or exposing the same for sale, shall forfeit and pay the sum of twenty pounds, and the same may be seized and publicly burnt. And carts, waggons, and warehouses may be searched, and if any such unseasonable fish or salmon are found packed up with good seasonable fish, the whole shall be seized and sold for the benefit of the poor where seized. And be it further enacted, that if any person or persons in drawing for salmon, shall inadvertently and unavoidably by nets or seins, take and catch any salmon spawn or shed,* without throwing back the same immediately into the water, he or they shall forfeit and pay the sum of one pound for every such salmon spawn so caught and kept.

And whereas the mesh of nets now used in the salmon fisheries is not only contrary to an existing law, but so small as to be destructive of the breed of salmon, and the salmon fisheries, by catching and destroying unsizeable fish,—be it therefore further enacted, that no nets shall be used for the taking of salmon unless the mesh of such nets in and throughout shall be two inches and half broad

* This should never happen, because the lawful mesh for taking sizeable salmon will always enable the spawn to escape. However it is as well to provide against it.

from knot to knot;* and all fishermen and others having, possessing, or using any net or nets for the taking of salmon with a mesh less than before mentioned, shall forfeit and pay the sum of twenty pounds, together with the loss of such nets, which shall be seized by any conservator, or other order of any magistrate, and publicly burnt.

And whereas all such salmon and fish of the salmon kind, or the greatest part of them, as ascend or get into rivulets and small streams,† either from

* The fishermen very well know what is meant by a mesh of two inches from knot to knot, though some, from selfish purposes, have endeavoured to quibble about it; they call it *diamond fashion*, that is, the measure is to take place from knot to knot, when the mesh is stretched out in the form of a diamond or four square.

† This is an evil of a much greater magnitude than may be supposed, and there is no law whatever to prevent it; for from the impediments which the fish meet with in their efforts to ascend the principal rivers, from weirs and close gratings, coops and hutches, and other devices, they force themselves in time of flood into any little stream which lies open, not deserving a better name than a gutter; and when such floods abate and these little streams return to their ordinary size, every fish is inevitably destroyed; for when once they are discovered it is impossible they can escape, and it very rarely happens that they can elude the perseverance and skill of the salmon hunter, either man or otter. I could mention several extraordinary but well authenticated instances of salmon taking refuge in these little paltry streams in the last season, in consequence, as is inferred, of being prevented by the Totnes weir from going up the Dart. A most unusual number of salmon in the last season also went up the river Harbourne (a branch of the Dart, about three miles below Totnes, which has

necessity, accident, or natural inclination, are, from the narrowness of such rivulets and streams, and

its source between South Brent and Dean Prior, flowing through Rattery, Harberton, and Ashprington, and thence into the Dart by Cornworthy); the greatest part of these, if not the whole, were destroyed by those nocturnal depredators the spearmen. I have been assured, that on this little stream, more than two hundred unseasonable salmon were speared in the autumn of 1819, having entered it for the purpose of spawning; they were consequently of scarce any value, if not absolutely unwholesome. Thus but little profit accrued to the poacher, whilst the whole of the increase that would have arisen from them was lost to the public, instead of yielding them as formerly, (and as it would do again were the subject properly attended to,) wholesome salmon at the moderate price at which, not many years since, it might be bought; for many can recollect when salmon sold for three halfpence per pound. Farther, there are on this rivulet, the Harbourne, from New Bridge to Brent, Harberton Ford (a space not exceeding eight miles), nine mills, if not more, every leat to which is a trap for the destruction of the fish, so that if a few by a miracle escape the spear, they must perish, or be taken at the mill-leat. It is generally supposed that the greater part of the fish above mentioned, in consequence of not being able to surmount the impassable Totnes weir, returning down the Dart, and finding an opening in this collateral rivulet, entered it, and were consequently all destroyed. Hence, then, the necessity of a power in the magistracy, after all improper obstructions are removed, to order the best means which they can devise, to shut out the fish from all such diminutive streams, and keep them in the large rivers where they cannot be so easily destroyed. I know where there are two salmon, a male and female, at the moment at which I write, in a stream so small that a man can step across it. Should they be discovered, their fate is inevitable. It is not meant that this power is to exclude the fish from small streams and to operate to the prejudice of any right of fishery,

the small quantity of water therein, as well as from the number of mills which are generally erected on such rivulets and small streams, exposed to certain destruction, by the facility thereby afforded to poachers, who use the spear and other unlawful means for the taking such fish, and the young of such fish as happen not to be killed before they have spawned, are also all or the greatest part of them taken or destroyed at mill-tails and in mill-leats, and produce no increase to the public stock. It is therefore expedient that the evil last before stated should, as far as possible, be remedied by the said fish being shut out or kept from such rivulets and small streams, and kept in the main and principal rivers where they can find better shelter and protection. Be it therefore enacted by the authority aforesaid, that the magistrates aforesaid in sessions assembled, shall have power to enquire into the state, condition, and aptitude of all such rivulets and streams, and collateral branches of rivers, and to determine whether they or any, and which of them, are fit and proper, and of sufficient magnitude for the breed and protection of the said fish, and shall have further power to erect or order, or

if such exist, *in the proper season*, when they may be taken at all places by legal and proper means; but only to prevent their being destroyed *at unseasonable times* during the fence days, when they ought not to be molested by any person, by any means, or at any place. It therefore appears to me that there cannot be any well-grounded objection to this clause, designed as it is for the benefit of all and the prejudice of none.

cause to be erected or ordered, any grating, weir, or such other means as they shall think proper, at such place and places, at such season, and for such length of time (during the fence days only, when salmon go up the rivers to spawn) as they shall deem expedient, to prevent such fish from getting into such rivulets and small streams. Such erections or contrivances for the purposes aforesaid, being constructed and managed so as to do no injury, or as little as possible, to the lands adjoining. — And if any person or persons shall remove, destroy, or injure such erection or means as aforesaid, so put up by order of the said magistrates, he, she, or they shall forfeit and pay the sum of 50*l*. to be recovered in manner as hereinafter expressed.*

And whereas it is a very common practice for fishermen to fasten nets across rivers, or to hold them in their hands at each end thereof for a considerable time, after such nets are shot, and before they are drawn, contrary to the letter and spirit of

* There ought also to be a handsome reward for the destruction of otters, as these animals make sad havoc among the salmon in the breeding season. So do also porpoises;—it is highly desirable that some method could be devised for taking them, and I think a net might be so constructed as to answer the purpose. I have known porpoises taken even in the herring nets; and if so, they might easily be taken in great numbers in nets made and constructed for the purpose, and their oil would richly repay the fishermen. This fish being of the cetaceous genus is soon drowned when once ensnared in a net.

the 2d Hen. 6th, c. 15. Be it therefore enacted, that the said act of the 2d Henry 6th, c. 15, shall stand in full force as if here further recited, and in addition thereto or explanation thereof, be it further enacted, that no such net or nets, shot as aforesaid into or across any river or rivers, for the purpose of taking salmon, or fish of the salmon kind, shall remain stationary at all, either in the hand or fixed to any thing whatever ;* but the same net or nets so shot into the water for the purposes aforesaid, shall constantly be kept in the regular or ordinary motion or act of drawing, without stopping at all from the shooting of such net or nets until the drawing thereof to shore ; and any person or persons so offending against this act in the last mentioned respect, or against the said recited act of Henry 6th, and shall thereof be convicted by

* The statute of Henry 6th proves this to be a very old practice, which is greedy in itself and hurtful to another's right of fishery ; it however continues to the present day. Thus the more we investigate this painful subject, and find out all the abuses and villanies that are practised upon it, we are almost lost in wonder, that there should be such a fish as a salmon in existence. They seem to be practised in all quarters, and by all persons, *high, low, rich, and poor* ; — to have engaged all the qualities of the human mind, except its wisdom, and all the propensities of the human heart, except its goodness. Ingenuity itself seems to have been tortured to find out expedients for erasing this valuable fish out of the book of nature. — The penalty, too, under the statute of Henry 6th, is not practically recoverable ; it is therefore necessary, that such penalty should be placed upon the same footing as the other penalties of this act, that is to say, made recoverable before the magistrates.

the oath of one witness, shall forfeit and pay the sum of 5*l.* for every such offence, to be recovered and applied in manner as hereinafter mentioned.

And whereas by an act passed in the 13 and 14 Charles 2*d.* c. 28., entitled an act for the regulation of the Pilchard Fishery in the counties of Devon and Cornwall, after reciting therein, that the public honour, wealth, and safety of the realm, as well in the maintenance of trade and support of navigation, as in many other respects, do in an high degree depend upon the improvement and encouragement of the fishery; and that for as much as of late years there have divers pernicious disorders and abuses, by the licentiousness of the times, crept in, and yet continue evidently destructive to that trade, for prevention and redress whereof there was no law hitherto particularly provided for the growing evils occasioned by driving nets and other fraudulent and injurious practices, to the extreme damage of the fishery; it was enacted, that after the 20th of May, 1662, no person should in any year, from the first of June to the last of December, presume to take fish in the high sea, or in any bay, pool, creek, or coast, of or belonging to Devon or Cornwall, with any drill-net, trammel, or stream-net, or any other net of that sort or kind, unless it were at the distance of one league and half at least from the respective shores, upon the penalty of the forfeiture of the nets so employed, or the

full value thereof, and one month's imprisonment without bail or mainprize.

And whereas the salutary provisions of the said recited act* are totally disregarded, by the fisher-

* This I know to be a fact, for when the herring and pilchard fishermen have encircled large shoals of this sort of fish and mackarel in their seine nets within half or a quarter of a mile from the shore, the trawlers have purposely dashed in among their nets, and broken them to pieces, and permitted all the fish to escape. Now the reason assigned for this extraordinary conduct is curious enough, but I have been respectably informed that it is the true reason; namely, that the taking of mackarel, herring, and pilchard, prejudices what is caught by the sale of the trawlers, which is chiefly confined to the better sorts of flat fish. I say, I know this to be a fact, because I once knew of an information at the suit of the king's attorney-general for this very offence, and in that information it was sworn to as a very common practice, and that the trawlers, to avoid detection, would cover the names of their vessels on the stern, and would threaten to run down any boat which should come near them. The expence of this information was considerable, and such as no man will incur a second time. It is therefore necessary, if government wish to give the country the benefit of this act, to give at the same time a more effectual way of putting it in force than by the necessity of having communication with the attorney-general, who in his professional capacity is a gentleman equally to be dreaded either as friend or foe. It is impossible that the sea-fish can ever be plentiful whilst these trawlers are allowed, with their small-mesh nets, to fish close upon the shore; and the injury which they do to themselves and the public is incalculable, for the reasons before assigned. An owner of a fishing smack this day (27th May, 1820,) told me, that the fishery was ruined by what he called the *bay fishery*, that is, by fishing so near the coast in the bays and creeks, and by the twelve feet nets: and added, that it was to be lamented the practice was not put an end to. But I say, that

men using trammel or trawl-nets, either by means of the great costs and difficulty of prosecuting upon the said recited act, or by other means; but such fishermen cast their trammel or trawl-nets so near the shore as they think proper, contrary to the letter and spirit of the said recited act, in the bays, creeks, and coasts of the said counties, and to the very great and manifest prejudice of the pilchard, herring, and other fisheries on the said coasts; the nets of which are broken to pieces or otherwise injured by the said trawl-nets, as well as to the very great injury and destruction of the fry and breed of sea fish in general; be it therefore enacted, that from and after the passing of this act, if any person or persons shall in any year from the 1st of June to the last of December, presume to take any fish in the high sea, or in any bay, pool, creek, or coast of or belonging to Devon or Cornwall, with any drift-net, trammel, trawl, or stream-net or nets, or any other net or nets of that sort or kind, unless it be at the distance of one league and a half at least from the respective shores, shall, upon every such fishing within such distance of the said coast, as allowed to be proved by the oaths of two credible witnesses, forfeit and pay

though this conduct is unlawful and the effect of it is personally prejudicial, *it cannot be put an end to, because the remedy is practically unattainable.* Let it then be asked whether such a public mischief should be without an effectual redress? Who is to prosecute through the attorney-general?—the idea is quite absurd.

the sum of 50*l.* for the first offence, together with the nets so unlawfully employed, or the value thereof; 100*l.* for the second offence, together with the forfeiture of such nets; and the like penalty of 100*l.* for the third offence, with the forfeiture of the fishing vessel so using such nets, and all her tackle, gear, and appurtenances, and one year's imprisonment of the offending party, being the commander of such vessel, without bail or mainprize. And the money arising from such forfeitures, either of the said sums of money, or the sale of such nets and vessels, shall be recovered, paid, applied, and disposed of as hereafter mentioned. And be it further enacted, that if the fact of distance aforesaid shall not be clearly proved to the satisfaction of the jury impaneled to try the same, under the direction of such magistrates as in other trials for offences, or if there be any nicety in the calculation or ascertaining such distances, or if it be shewn that such fishermen were not aware that they were fishing within the distance aforesaid or contrary to any notice or warning such fishermen might have received to that effect; or that he or they did not intend wilfully to infringe the provisions of this act, it shall and may be lawful to and for such jury, under the directions of such magistrates in sessions aforesaid, not only to mitigate the penalties last aforesaid, to any sum the said court and jury sworn shall think proper, but altogether to relinquish and discharge the same. And as upon some occasions difficulties may arise respect-

ing the clear proof of the distance of vessels from the coast or shore, it shall and may be lawful for such magistrate in sessions assembled (if they shall think proper) to receive the testimony on oath of the persons on board such vessels, and to require the same, as to the distance of such vessels from the shore or coast, and to judge thereof as they shall think the same deserving of credit.

And whereas, by an act passed in the 1st Geo. 1. c. 28, entitled an act (among other things) *for the preservation of the fry of fish*. After reciting that of late years, the breed and fry of sea-fish have been greatly prejudiced and destroyed by the mesh of nets of too small size or mesh, and by other unwarrantable and illegal practices ;—it was enacted, that from and after a day therein mentioned, if any person or persons should use at sea upon the coast of England, any trawl-nets, drag-net or nets, or any net whatsoever, for the catching of any kind of fish (except herrings, pilchards, sprats, or lavidnian), which hath any mesh or make of less size than three inches and a half at least, from knot to knot ; or which hath any false or double bottom, or pouch, or shall put any net or nets, though illegal size or mesh, upon or behind the other, in order to catch and destroy the small fish, which would have passed through any single net of three inches and a half mesh ; all and every person and persons so offending shall forfeit all and singular such net or nets so used, contrary to the true intent and meaning thereof. And also

for every such offence the sum of 20*l.*, to be recovered and levied by distress and sale, as therein mentioned. And the said act directed the said penalties to be divided between the informer and the poor ; and the said nets to be burnt.—And by the seventh section of the said act, “*for the further preservation of the said fry of fish,*” it was enacted, that if any person *bring to shore* in England, *sell, offer, or expose to sale, or exchange* for goods, any unsizeable fish, viz. : bret, turbot, brill, or pearl, codlin, whiting, mullet, bass, plaice, soles, or flounders, which shall not be of the several lengths or sizes following, from the eyes to the utmost extent of the tail, viz. : every bret or turbot, 16 inches ; every brill or pearl, 14 inches ; every codlin, 12 inches ; every whiting, six inches ; every bass and mullet, 12 inches ; every sole, eight inches ; every plaice or dab, eight inches ; and every flounder, seven inches ; every person so offending shall forfeit such unsizeable fish *so brought on shore, sold, offered, or exposed to sale, or exchanged* as aforesaid, as in the said act mentioned, together with the sum of 20*s.*, to be levied as therein mentioned ; and, in default of payment, to be sent to the common gaol of the county, there to be severely whipt and kept to hard labour for six days, and not longer than fourteen days.”*

* This act, as has been already observed, was passed *to preserve the fry of fish* ; and yet, without incurring its penalties, the fry of fish are destroyed with the most unbounded latitude. The fishermen should be prohibited from keeping such unsizeable fish,

And whereas the said recited statute is so much disregarded and set at nought, as if no such law existed, either from the difficulty of proving offences committed under the same, or other causes, the trawl fishermen using nets of a mesh so small as to destroy innumerable quantities of fry and unsizeable fish, which are either consumed by such fishermen for their own private use, as not being saleable; or thrown into the sea as altogether useless, instead of fishing with nets of a mesh of three inches and half, according to the directions of the said last recited act, which would enable the small and unsizeable fish to escape unhurt. Be it therefore enacted, &c., in addition to the said last recited act, that if any person or persons shall wilfully take, kill, or destroy, at any time or place whatever, any of the before named fish under the size before mentioned, with any net whatsoever, and shall not throw back into the sea again all and every such unsizeable fish which may be accidentally or unavoidably taken, he, she, or they, shall forfeit or pay the sum of 5*l.* for every time such net shall be drawn, either on shore or on board such vessel. And be it further enacted, that

and as far as possible from catching them,—and if the use of the legal net were enforced, it is not likely that many unsizeable fish would be taken. As it is not possible for the motions and actions of these trawlers to be watched when at sea, there is no rational way of preventing it, than by seeing that they possess no unlawful nets, and making their vessels subject to search and seizure.

if any person or persons shall have in his, her, or their possession, or on board any vessel or vessels belonging to him, her, or them, whether commanded by the owner or any other person for him, her, or them, such person or persons in whose possession such unlawful net or nets, made contrary to the said last recited act, shall be found, or the owner thereof, or of such vessel, shall forfeit and pay the sum of 50*l.*, together with the forfeiture of such nets, which shall be burnt by order of such magistrates in sessions aforesaid after conviction. And if such unlawful net or nets shall be found on board any vessel whatever, after 20 days' public notice of this act shall be given by order of such magistrates in the market or other common places of every fishing town upon the coast of Devon and Cornwall, the vessel and vessels on board of which such nets shall be so found, shall be seized and detained, forfeited, sold, and disposed of, as hereafter mentioned. And be it further enacted, that an information on oath being given to any magistrate, by a conservator appointed under this act, of the place or places, vessel or vessels, where such illegal net or nets may be suspected to be deposited or secreted, it shall and may be lawful, and any magistrate is hereby commanded to issue his warrant or warrants to the constables of the parish where such illegal nets are suspected to be, or to any conservator or conservators appointed under this act, and which constables or conservators are hereby authorized to take any person or persons to

his or their assistance, and to make search for and seize such nets on board such vessels or elsewhere, either at sea or elsewhere, as well as such net or nets, either in part or in whole as shall be found therein, and to secure and dispose of the same as such court of sessions may direct; and any person or persons rescuing or attempting to rescue after the seizure thereof, either by force or fraud, such net or nets, or vessel or vessels, shall be guilty of felony, and transported for seven years; and any person or persons refusing to permit such peace-officer or officers, or conservator or conservators, to search his, her, or their vessel or vessels, either on shore or at sea, for such unlawful net or nets, after producing the warrant from such magistrate, or shall obstruct such peace-officer or any officer or conservator appointed under this act, either relating to the salmon fisheries, or otherwise in the execution of his duty, he, she, or they shall forfeit the register of the said vessel or vessels, so refused to be searched, and such vessel or vessels, by order of the collector of the customs of the port to which such vessel belongs, shall not be allowed to go to sea without being liable to seizure, as contraband or seizable property, until the owner or commander of such vessel shall have delivered up such unlawful net or nets, if he or they have any such, and shall have given security to such collector of customs not to violate or disobey this act, for the time then to come, and shall also enter into recognizance with two sufficient sureties, to answer and make amends for any

outrage committed on or injury done to such peace-officer or officers or conservator in the execution of his or their duty under this act ; and shall forfeit the sum of 20*l.* for such obstruction on any conservator. And be it further enacted, that after notice of this act shall be given to any maker or manufacturer of fishing nets, if he, she, or they shall make or manufacture any trawl net or nets with a mesh contrary to the said last recited statute, or any other net or nets contrary thereto, or the same net or nets in part or entire, can or shall be found in his, her, or their possession, or on his, her, or their premises, or at any other place within his, her, or their knowledge, after such notice as aforesaid, he, she, or they, shall forfeit and pay the sum of 50*l.* for the first offence, and 100*l.* for every other offence, to be levied, seized, and disposed of after conviction, by the court of sessions aforesaid, as hereafter mentioned, together with the said nets, which shall be publicly burnt by order of the magistrates in sessions aforesaid. And be it further enacted, that nothing contained in this act shall extend, or be deemed or construed either to legalize any fish-hook, coop, bay, or other work which shall have been erected, put, placed, fixed, or used in any such arm of the sea, or estuary or mouth of any river, or in, or upon any bank, sand, or shore thereof, or near thereto, or in or near any river, rivulet, brook, stream, pond, pool, lead-mill, dam, sluice, or cut which runs into, or otherwise communicates therewith, or to the present modes or methods used for taking and

killing fish therein, other than, and as are in this act particularly prohibited ; nor to take away the right of angling with rod and line, nor to affect any right of fishing by grant or prescription in any individual or body corporate, nor to demolish, take away, or destroy such fish-hook, coop, or other work ; but the legality or illegality thereof shall stand and continue the same, as if this act had never been passed, any thing herein contained to the contrary notwithstanding.* And be it further enacted, that the magistrates in sessions aforesaid, shall have power to appoint such and so many other conservators, when, where, and as often as they may think proper, who shall be sworn duly to execute the office of conservator, and to give information to some magistrate of all and every violation of such part of this act as relates to the sea fishery, in like manner as such conservators are appointed for the preservation of the salmon fisheries, as may come to their respective knowledge, and all prosecutions under this act shall be carried on, and notices thereof given in the name or names of such conservator or conservators, whose expences and loss of time shall be defrayed out of the penalties to be recovered under this act, according to the discretion and direction of such magistrates in sessions aforesaid. And be it further enacted, that all conservators appointed under this act, shall and may in the exercise and performance of their

* This clause should be altogether omitted, and the act should contain nothing but a reservation of private rights, such as exist by grant or prescription.

several duties, either by night or day, walk by the banks and sides of rivers, or upon the sea coast, upon any man's land, doing no wilful injury, without being guilty of any wilful trespass, and may pursue any suspicious persons who run from him to any place whatsoever, without being guilty of such trespass, though amends shall be made for any actual injury done.

And be it further enacted, that all and every the pecuniary and other penalties and forfeitures by this act imposed, shall be sued for, recovered, and adjudged, and every offence against this act heard and determined (except as hereafter mentioned) by and before a jury of the county, where such offence shall be committed, impanelled and sworn (who shall be the judges of all matters of fact herein contained) and the magistrates assembled at the general quarter sessions for the county, shire, division, city, or place, wherein any offender against this act shall be or reside, by and upon the oath of one or more credible witnesses (except as aforesaid relating to vessels fishing within a league of shore) or by the party or parties in like manner as the said court of quarter sessions have been accustomed and has a right to try, hear, and determine, all and every other offence and misdemeanour over which it has jurisdiction and cognizance. And in case any person who shall be convicted of any offence or offences against this act, shall not within one month after such conviction pay into the hands of the clerk of the

peace of the county, where the same shall be tried, the penalty or penalties, in which he, she, or they shall have been so convicted, it shall be lawful for the said court of quarter sessions by warrant, to order any peace-officer to take charge of, and keep in custody, any such person so convicted, and thereby commit every such offender to the common gaol or house of correction for the county or place for the time hereinafter mentioned, unless such penalty or penalties shall be sooner paid, or otherwise such court of sessions may grant their warrant and warrants in due form of law, to levy and recover the said penalty and penalties by distress and sale of the offender's goods and chattels, after five days' notice in writing that the same may be sold to the greatest advantage. And all such penalties and forfeitures to be paid or levied as aforesaid, shall be paid, applied, and disposed of as follows: one clear moiety thereof to the informer or informers, and the other moiety, after defraying all costs, charges, and expenses, to the poor of the parish where such offence or offences shall have been committed, or to the poor of any other parish near thereunto, according to the discretion of the said magistrates, and the overplus, if any, to be returned to the owner of the goods distrained. And in case sufficient distress or distresses shall not be found, or such penalty or penalties shall not be immediately paid, according to the judgment of such court, the court aforesaid shall commit such offender or offenders to such gaol or house of cor-

rection as aforesaid, for any time not exceeding four months, nor less than two months; for the second offence, any time not exceeding eight months, nor less than six months; and for the third offence, and every other offence, any time not exceeding twelve months, nor less than eight months; there to be kept to hard labour, and to be and remain without bail and mainprize, save and except as aforesaid, when it is otherwise directed by this act.

And be it further enacted, that it shall and may be lawful for any justice or justices upon information being made to him or them upon oath, against any person or persons who shall or may offend against any thing contained in this act, to grant his or their warrant or warrants, to apprehend any person or persons so offending, and to cause such offender or offenders to be brought before him or them, and to enter into recognizance with two sufficient sureties, to appear at the then next ensuing quarter sessions of the county or place, there to be dealt by according to law, and in default of such sureties, such offender shall be committed to the house of correction for the said county, unless such justice shall think proper to take the recognizance of the offending party alone, which he is hereby authorized to do. And it shall and may be lawful for such court on motion and proper cause shewn, to adjourn the trial of any offence committed under this act, to the next following sessions, if they think proper so to do.

* And be it further enacted, that no owner, farmer, or occupier, or any person otherwise employed in any fishing or right of fishing in any arm of the sea, river, or other water whatever, shall be deemed an incompetent witness to prove any offence or offences done or committed against this act, by reason of his, her, or their being such owner, farmer, or occupier.

And be it further enacted, that every pecuniary penalty and forfeiture imposed by this act, may be sued for and recovered, together with the full costs of suit, by and to the only proper use and behoof of any person who shall inform or sue for the same, in any of His Majesty's courts of record at Westminster, by action of debt, bill, plaint, or information, wherein no essoin, wager of law, nor more than one imparlance shall be allowed. — And be it further enacted, that no person who shall be convicted of any penalty under this act, shall be prosecuted under any other for the same offence; and that all and every conviction and prosecution under this act, shall be deemed and taken to be final to all intents and purposes whatsoever.—And be it further enacted, that no action at law shall be brought against any magistrate or magistrates, or other person or persons, for any thing done in the execution of this act, until one calendar month

* I have continued this section more because it is in the former act than because I think it necessary or proper.

after notice thereof in writing shall have been given to the person or persons against whom such action shall be intended to be brought or left at his, her, or their last or usual place or places of abode or residence, setting forth the cause of such action, and containing the name or place of abode of the plaintiff or plaintiffs, and also of his or their attorney, and that every action brought for any thing done as aforesaid, shall be brought within the space of three calendar months next after the cause of action or complaint shall arise and shall be laid and sued in the county, shire, city, or place, where the fact shall have been committed and not elsewhere, unless the offence shall be committed on the sea, in which case it shall be laid in that county opposite the coast of which or near unto which the cause of action shall arise, and the defendant or defendants therein may plead the general issue, and give this act and the special matter in evidence at any trial to be had thereupon, and that the same was done by virtue thereof; and also that it shall and may be lawful to and for such person or persons at any time before action brought, or after, by leave of the court where such action shall be pending, to tender amends to the party complaining, or his or their agent or attorney; and in case the same is not accepted, to plead such tender in bar to the action, for the further prosecution thereof, together with the plea of not guilty, and any other plea with the leave of the court.

And if on the trial of such action, it shall appear that the same was brought before the expiration of one calendar month next after such notice shall have been so given or left as aforesaid, or after the end of three months next after the cause thereof shall have arisen, or if such action shall have been brought or laid in any other county or place than as aforesaid, or after sufficient tender of amends shall have been made to the party or parties aggrieved, that then and in any of the cases aforesaid, the jury shall find a verdict for and acquit the defendant or defendants in such action; or if plaintiff or plaintiffs shall discontinue the same after the defendant or defendants shall have appeared, or shall be nonsuited; and if upon demurrer judgment shall be given against the plaintiff or plaintiffs, the defendant or defendants in such action shall have double costs, and have the like remedies for recovering the same, as defendants have for recovering their costs in other cases at law, and that no action, suit, information or proceeding whatsoever shall be brought or commenced against any person or persons for any offence or offences against this act, unless the same shall be laid or commenced within six calendar months next after every such offence or offences shall have been committed.

Provided always and be it further enacted, that nothing herein contained shall extend to affect the rights of any lord or lords, lady or ladies, and

they are hereby required to appoint conservators for the protection of any river or rivers, coast, bay, or creek, within their respective manors. *

Provided such conservators are sworn duly to execute that office as aforesaid.

Provided also, and it is hereby enacted, that nothing in this act contained shall extend or be construed to extend to prejudice or derogate from the rights, interests, privileges, franchises, or authority of any body or bodies politic, corporate, or collegiate, or their successors, or to prohibit, defeat, alter, or diminish any power, authority, or jurisdiction, which such body or bodies politic, corporate, or collegiate, at the time of the passing of this act, did or might lawfully claim, use, or exercise in any river or rivers as aforesaid.

Provided also, and it is hereby further enacted and declared, that nothing in this act contained, shall extend or be construed to extend to prejudice or derogate from the rights, interests, privileges, franchises, or authority of the mayor and commonalty and citizens of the city of London, or their successors, or the Lord Mayor of the said city for the time being, or to prohibit, defeat, alter, or diminish any power, authority, or jurisdiction, which at the time of the making this act,

* It is, however, proper that the sessions should have a concurrent and controuling power with lords of manors, otherwise, through ignorance or obstinacy, this part of the act might be rendered nugatory.

the mayor and commonalty and citizens of the city of London, or the Lord Mayor of the said city, for the time being, as conservators of the river Thames and waters of Medway, did or might lawfully claim, use, or exercise.

CONCLUSION.

THE state of the salmon and channel fisheries is now before the public, Every man, from the prince to the poorest peasant, is interested in their prosperity. But I will venture to affirm, that though some good may be done by enforcing the present defective laws, yet, unless the act which I have drawn, and which, with the substance of this work, was published three years ago in the newspapers, or some such act, and as much better an one as can be framed by any one who will take the pains to do it, be passed, the fisheries will never attain to that importance to which they are entitled, nor produce the advantages of which they are capable. There cannot be a stronger proof of the truth of this remark, than the wretched condition to which the fisheries, and the salmon fisheries in particular, are reduced. This is so notorious a fact that it cannot be either denied or controverted. It follows then, that the cause should be removed : and I think it must appear that such cause is wholly artificial and removable, and by no means physical and irremediable. Let it never be forgotten, that whilst

the deadly spear is suffered to "operate unseen," screened by the shades of night; and whilst impervious weirs, small meshes * to nets, fish locks, injudicious close times, and such other unwarrantable contrivances as are already particularised, which obstruct the free passage of the fish, are suffered to exist, this subject will never present any thing but a forlorn hope. Exclusively of the impolicy of such conduct, there is something absolutely bordering upon brutality in thus destroying the salmon, when they are out of season and unwholesome; when they seem to court the protection of man by placing themselves in his power; and when, just about to shed their roe, the destruction of one is the destruction of so many thousands.

I am, however, given to understand, that I have greatly overrated the produce of the salmon; it is very possible; but it signifies little to the general question; the bearing of which is, that a most extensive abuse exists, and demands to be corrected. It is not at all unlikely that there

* I have this very day, 26th August, seen the fishermen in the Dart, between Totnes bridge and weir, sweeping the whole river with a net, the mesh of which was not an inch broad. I took the net in my hand and examined it. How can the fishery survive, thus abused? Not a drop of water running over Totnes weir, but the whole stream conducted into the mill-leat. Such fish, great and small, as come up the river, are stopped at the weir, and are there taken either in the lock or by the small-mesh net,

actually is a great difference in the fecundity of different fish, arising from their nature, age, and size, and, perhaps, from the season of the year. But the estimate which I have made is founded on a reported experiment. There may be great difficulty in fixing an average number of ova where fish vary in size from 8 and 10 pounds to 60 and 70; for it cannot be imagined that a small fish will yield as many pea as a large one. About four years ago I was very desirous of ascertaining this fact, but no book could furnish the desired information. At last, after much inquiry, I met with a person who assured me, as I have already stated, that he had counted a certain portion, and afterwards, by weighing what remained, he judged the whole to be 600,000.

There is no reasoning from analogy to other fish; as a proof of which we have only to refer to the produce of the sturgeon, the cod, and the crab. Even the little herring has a roe containing 10,000 ova: and it is said by Goldsmith, vol. ii. 410—415, that the progeny of a single one, suffered to multiply unmolested and undiminished for twenty years, would become greater in bulk than ten such globes as that we inhabit. Let us not wonder, then, or think it at all extraordinary, that so large a fish as a salmon, of perhaps 20, 30, or 40 pounds, should produce so many pea. Yet it is remarkable, that no author, in the history of this fish, that I could ever find, gives the amount by experiment, or even ventures a statement upon it.

Whether, however, some produce 600,000, and others only 5000 or 500, there can be no justification for their impolitic, and wanton destruction ; on the contrary, the fewer the number, the greater the reason why they should be more closely protected and preserved.

The detail of the foregoing bill is open to every man's animadversion and correction—to add or to curtail—in short, to improve. There is no design at subterfuge. The most severe critical discussion will favor the objects which I have in view—truth, justice, and the public good. I have taken this trouble for no other purposes. It will probably be complained, that there is a great deal of tautology in these remarks: there may be; but I have no thirst for literary fame; and as a literary performance the work is altogether beneath criticism. I readily submit to such accusation; yet there may be some advantage even in repetition, since the oftener a truth is told the more likely it is to make an impression. It may be said again, that the book contains much irrelevant matter; and, though it may not be so, yet I will allow that charge also, only observing, that if such matter should not elucidate or explain, there is no great harm in trying to enliven a dry work. All these weighty charges I must however bow to, and I can afford to do so, confident that the importance of my object will abundantly outweigh the defects of its performance.

I therefore conclude with observing, that Providence has filled the rivers and the seas with

abundance ; that they are literally animated with the means of administering to the necessities, the comforts, and the luxuries of every rank of society. As an encouragement to trade they would pour forth inexhaustible riches, and yet — wonderful to say in this enlightened age — we see the greater part of their valuable produce rendered abortive, through the want of a law which would compel the human species to act a part equally dictated by humanity and by sound policy.

ABSTRACT OF THE EVIDENCE BEFORE THE COMMITTEE OF THE HOUSE OF COMMONS.

Mr. John Wilson, a proprietor on the Tweed, and a partner in a large company, tenants of fish-

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ON reading through this report, I was much gratified to find that in all material points the witnesses before the committee have unequivocally confirmed the suggestions in this pamphlet, which were, with a few slight alterations, submitted to the public through the *Western Luminary*, in a series of weekly papers about three years ago. The proposed Act remains exactly as it was then printed (in May, 1820), and has been given to the publisher of the present edition in print. Before I indulge in any observations on the detail of this evidence, I would wish briefly to state the general impression which it has made on my mind, and the particular objects of its consideration. With the exception of the testimony respecting cruives, it may be said that there is a general concurrence of all the witnesses in the propriety of protecting the breeding fish, extending the close time, and such other measures as are suggested in the course of this pamphlet; though it is rather to be lamented that a few more respectable people, such men as Mr. Drummond, perfectly disinterested in the fisheries, had not been examined, instead of interested fishermen. To expect perfectly impartial evidence from people who are interested in

eries there.—Attributes the scarcity of salmon to the destruction of the breeding fish in close time,

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the subject matter, is expecting more from human nature than it is capable of performing. We must make all due allowances, and not require from others what we should not be able to do ourselves. Still we must find out the real truth if we can, but we must look for it among those who have no interest in its concealment.

There is a great deal of matter in this report, though curious and instructive, which cannot be applied to any beneficial purpose; things of most importance to be well understood are those which can be improved by the power of man. It is desirable to obtain whatever will add to our stock of knowledge; but it is most desirable to dive deepest into, and investigate most closely, those branches of science which can be turned to the most profitable account. The grand question on this subject is, how are the abuses to be prevented which render the fish scarce, and how are such fish to be rendered more plentiful, so as to serve the wants of the public in the most beneficial and effectual way? In the more material bearings of this question, all the witnesses cordially and fully agree. *These*, then, are settled. The committee might about as profitably examine witnesses to ascertain whether there is a moon, as ask further questions upon these points. There are, however, *other objects* of much less moment on which there appears to be a difference of testimony; and these objects, after which the committee seem to have made hottest pursuit, are, first, the stake-nets, then the coble nets, the grampuses, the species of the fish itself, and the cruives; upon all these we will make some remarks, as I take all the other matters

though they are never at that time good or wholesome; to the defects of the laws; and to depreda-

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to be settled by universal consent. We are, then, at issue only on the cruives and the species of salmon, of which in their order.

1. As to the stake-nets, I confess that until I read this report and saw the drawing at the end of it, I had formed a very different conception of the thing from what it really is. We see that the evidence is different on their operation; some say that they are injurious, others that they are beneficial; the man who derives his living from them cannot be expected to concur in their condemnation, whilst he who is prejudiced by them represents them to be of the most destructive nature. As well might we expect the poacher to condemn the spear, and the net and coble, in close time, as the owner of stake-nets to say they are prejudicial to the general prosperity of the salmon fisheries. This fact must be ascertained by the knowledge of impartial, disinterested, and intelligent men. Without pretending to decide the question, I would merely suggest, if the other much more important points were settled to be carried into a law, whether, if the stake-nets were only used *without* the rivers in the six summer months, and the mesh or moke were to be two inches and a half broad, by which the unsizeable fish would escape, they would do any harm. This, however, must be decided by other evidence than that of interested fishermen. I have heard it remarked, and I believe it to be true, that if the more important abuses are corrected, the stake-nets in the proper season are not entitled to any consideration.

2. As to the net and coble; the fish must be taken with

tions committed in the months of October, November, December, and January. Fish are attracted

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something. If this net be prohibited in close time, and that close is extended to the end of March, this net can do no harm. It is allowed to be only injurious when the bottom rope is drawn over the spawning beds, as it then injures or destroys the nests of eggs by removing the sand by which they are covered. If this net is not allowed to be used until after the ova are fructified into animation, and if it be made with the legal mesh, *it can do no mischief*, as all the fry and unsizeable fish will escape; then extend the close time to the end of March, and there is an end to all possible objection to the net and coble. If this should not be deemed sufficient protection for the spawn beds, prohibit the use of it to one month longer, at all places beyond the flow of the tide.

3. As to the grampuses, porpoises, and seals; in my opinion it is quite easy to catch all these rapacious monsters when in an estuary or river; and as their depredations are so extensive, the experiment would be well worth the expence, and the produce of the animals themselves would largely contribute to defray it.

4. As to cruives; this engine I take to be what we call fish locks, or something of that nature, of which there are a most ingenious variety, all equally destructive; in law a nuisance, in fact an engine whose effect is annihilation, and a rank piece of injustice to those who have fisheries above them, as they prevent the fish from having a free passage, capturing all those which go up, and obstructing those above from going down. Whilst these cruives or fish traps are tolerated, the fisheries can never prosper. I have

by lights and then speared, a practice which is called burning the river. Fry are also killed at

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said so much on this subject already as to render it unnecessary to add more. Power once possessed, is so frequently abused, that it is at all times a dangerous and formidable weapon in the hands of man; it should therefore be guarded with caution, and watched with jealousy. These cruives once put up in the least objectionable way, soon get a legal footing; *they become prescriptive*, are innumerable, and are the destruction of all the fish on every stream where they exist. Let them not then take root; it is easier to exclude than to eradicate. Prescription is a dangerous doctrine. Those which exist in England have their origin in encroachment. What the Scotch laws may be I know not, but by those of England we have seen that the statute of Elizabeth says, that salmon shall not be taken by any engine or device, but by the net of two inches and half mesh: if so, how can these things be regarded in any other light than as encroachments on the privileges of the public? Down then with your fish traps and cruives, and give the fish a fair chance, by which we shall have a thousand, where we now get one.

Mr. Wilson very honestly tells us the truth, that the scarcity proceeds from the destruction of the breeding fish in close time, and to the defects of the laws, as we have just seen by his evidence. If fry are destroyed in any way it is very easy to prevent it; but it is absurd to attribute the few taken by the amusement of angling as contributory to the general scarcity; it is as a drop in the ocean, and wholly beneath the dignity of parliament to take that recreation from gentlemen who delight in it,

mill-sluices, and with different engines. He reproaches angling in April and May; in these months fry go to the sea, and return again in June and July from three to four and five pounds' weight, then called gilse; they appear like gilse when one pound, and have no other name than those of fry and gilse; no destruction before the spawn comes to life; destruction in close time is much increased of late years; many fish are unwholesome besides those caught in close time; cannot suggest any improvement in the mode of fishing; thinks the close

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who ever have inherited it as their patrimonial right, secured by statute, and forming part of the laws of England. The rigour of the game laws should rather be diminished than increased. He thinks the close time should commence on the 10th of April; this would certainly be an improvement, the fish being then large in roe (of which I have had two instances this last week, 12th September), yet the fish were very good: whether the defence should commence so soon must be determined by the wisdom of parliament; but the rivers should certainly not open until the 1st April. "*That the same close time should apply to all rivers,*" I heartily agree with him, for the reasons which I have before assigned, and I now feel confident that I am right. He also confirms my idea of the propriety of seizing poachers by the sides of rivers; but as this witness approves of the cruive, and asserts that its removal *would not allow* more fish to go up, I should rather suspect that he is the owner or occupier of one.

time should commence on the 10th of September, and end on the 1st of February; many unwholesome fish are caught in September, full of spawn; salmon are at their best about Midsummer; fall off afterwards; a whole family died in consequence of eating unwholesome salmon; they begin to leave the sea about August; *the same close time should apply to all rivers*; angling very destructive to fry in April and May; repeats that the close time should apply to all rivers; no fishing should be later than the 10th of September; thinks that all salmon return to the same rivers where bred; thinks there are different species of salmon; all fish come into the rivers if they can; *poachers by the sides of rivers should be arrested in close time.*

Examined again. — No artificial works or manufactories on the Tweed that prevent the passage of the salmon; some mill-slucies in the small rivers; without a new law the fisheries on the Tweed will not pay the expenses of fishing; angling should be prevented, because if the fry are killed there can be no salmon; foul fish are more greedy after the fly than new fish; spearing much practised high up the Tweed in close time; a fish of a pound will go through the net; it will take one of a pound and a half; stake-nets destroy the fisheries; the mesh of the nets two inches and a half; does not think the cruive any injury to the free passage of the fish, or that its removal would allow more fish to go up the river.

James Bell, fisherman on the Tay. — Fishery decreased generally; attributes the diminution to the stake nets, *killing the fish in close time*, and *destroying the fry*; there is a cruive dyke in the Arne river that runs into the Tay; the present laws are *not sufficient for the preservation of salmon*; stake nets are injurious to the fishery; can't say when they were established, but the salmon have decreased ever since they have been used; poachers fish with a net and use the spear in close time; fish good on the 10th of December in the Tay; thinks the fishing should end on the last of September, and open on the first of April; thinks the fish in different rivers vary, and that they return to the rivers in which they were bred; the removal of the cruive dykes would allow the fish to go further up; *it is all poaching in close time*.

William Bell, foreman to the former. — Attributes the diminution of the fish to a want of attention to the *close time*, and to the stake nets on the coast; stake nets on the Tay established there about twenty-seven years ago, removed about twelve years ago; an increase of fish immediately after.

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Mr. James Bell. — After attributing the decrease to the causes before mentioned, this gentleman says, the fishing should cease on the last of September, and open on the 1st of April. That the removal of the cruive dykes *would* allow the fish to go further up; and that "*it is all poaching in close time*."

Thomas Proudfoot, fisherman on the Tay. — Attributes the decrease to the stake nets, *the violation of the close time, and the want of a new law*; thinks fish return to the river where bred; recommends *guarding the close time better*; reprobates angling.

James Bell again examined. — Some fish are more forward in roe than others.

William Bell again examined. — Says it is a mystery where salmon winter; thinks they come from the north.

John Johnson, fisherman. — Acquainted with the rivers of Scotland and Ireland; salmon gene-

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Mr. Thomas Proudfoot recommends guarding the close time better; he generally confirms what the others say as to the main points.

Mr. John Johnson does not think they spawn early in the season, and I believe he is right. Some may spawn earlier than others; the fry are chiefly animated in March.—If this gentleman's estimate of the number of pea in a salmon roe be correct, I must have been grossly imposed upon. It must, however, be recollected, that this calculation was made on a *Scotch* salmon, mine was on *South Hammer*. Perhaps the rivers in Scotland may be as poor as the earth is barren and unfruitful, so that the inhabitants of the water, like those of the land, can be just preserved from actual starvation; and such waters are not favourable to fecundation. This, however, is

rally spawn in the upper parts of the river out of the tide; they may spawn where the tide reaches; often in the shallow fords, and in small streams connected with large ones; roe and milt begin to appear in *May*; applies this to all rivers, and to salmon generally; the latter exhausted by being in the fresh water; would go back to the sea, if they could, to recruit their strength; get worms and maggots if long in the fresh water, and these would kill them if they did not go back to the sea in order to acquire strength to spawn; best in season when they have the sea-louse; does not

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more matter of curiosity than of consequence, since we can neither add to or diminish their powers of multiplication; and, as I have said before, the fewer they produce the more they should be taken care of. What this gentleman says about the different species is answered before;—it is opinion only, he knows of no experiments. He confirms what I had before published about the destruction by the mill-wheel. He also thinks that the fence days should be the same all the kingdom over. I am indebted to Mr. Johnson for thus confirming every thing which I published three years ago in the *Western Luminary*; he but differs from me in opinion as to the species of gilse and salmon. I have observed before, that nothing is more easy than to catch all the grampuses, porpoises, and seals, when in the estuaries and rivers; the two former have only one young one at a time, and if their number were once materially diminished, they would not be soon recruited. The *Mysticetus* whale is almost annihilated in Greenland. I do not under-

think they spawn early in the season, but only in the autumn months; fish don't breed in the open sea; *they spawn principally in November, December, and January*; male and female meet, furrow in the sand, deposit their spawn, and cover it up with gravel; male fish has a large beak upon his mouth then; after spawning they return to the sea, if not obstructed; *fry principally animated about March*, some before; they reach the sea about May; ova from 13 to 26,000, average about 20,000; thinks that every pea may come to a fish, but cannot state any circumstances on which to found his opinion; does not consider the whiting or laspring to be a young salmon; assigns as a reason that they have milt and roe; *does not know of any experiments* by marking the tails whether they are the same fish or not; considers sea-trout

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stand the description that is given by the witnesses of these fish; a grampus is twenty feet long; they speak of their being half the size; our porpoises generally run from eight to ten feet. Perhaps they might have been more plentiful upon this coast when salmon were so; but they generally appear when the herrings do, and are thence called Her-ring-hogs. We have no seals, though a wandering individual, I have been told, is sometimes seen on the coast of Cornwall. Of otters we have abundance, which do incredible mischief to the breeding fish, when assembled high up the rivers for the purpose of spawning. This animal is a wanton slaughterer; he will kill twenty without eating one: they often leave the salmon on the banks of rivers,

to be a distinct species ; differ little from the salmon in form ; they spawn and return as kelts ; could not distinguish the fry of the sea-trout from that of the salmon, they all descend together ; *kelt means fish after spawning ; the term is applied to all three fish ;* some call them foul fish ; net and coble fishing the great injury to the fisheries ; great numbers of salmon fry are destroyed by *mill-wheels ;* cannot go down by means of *dykes across the rivers ;* recommends an escape for the fry ; close time must be enlarged and regulated ; salmon do not advance far up the rivers at all seasons, only in the spawning time ; they run backwards with the tide in all directions ; great number destroyed in the Tay by grampuses, porpoises, and seals ; the two former appear in April, the latter all the year ; often caught in the stake nets ; five grampuses in one tide ; stake nets have diminished their numbers ; thinks these animals destroy twice

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bitten and a little eaten behind the heads. The time when they commit the greatest mischief is when the fish are engaged *in the act of spawning.* They hunt them to those spots as a dog does a hare. They come on the fish by surprise ; and when they are not prepared for such an attack, the otter flies upon his prey with the velocity of an arrow, and never misses either wounding or taking. A man last winter stuck his spear into an otter instead of a fish. Four or five guineas a head would procure the destruction of the whole in six months. The new act should provide a clause to that effect.

as many as men; attributes the decrease to the *non-protection of the breeding fish and the fry.*

John Johnson again examined. — Salmon *get bad after being out of the sea; get worse and worse; lose their bright colour and firm state; get longer and lighter, when in the fresh water; the nearer the sea the better the fish; do not continue good many days after being out of the salt water; ascribes the decrease in the Tay to the non-protection of the breeding fish; to beginning too early to fish; to poaching fishing in close time; to the destruction of the breeding fish, and of the spawn or fry; and to the want of efficient modes of fishing; sea-louse does not remain many days after the fish come into fresh water; they go off by degrees. The breeding season is the same in all places, but the fence days are not so; THINKS THE FENCE DAYS SHOULD BE THE SAME ALL THE KINGDOM OVER; all fish find a market, bad as well as good; but the foul fish are very unwholesome; people will buy any thing that is cheap; has seen the sea-louse twelve miles up the rivers; recommends the beginning to fish ON THE 10th MARCH, and to leave off the MIDDLE OF SEPTEMBER, as a GENERAL RULE; yet a few sound fish may be caught earlier in the year; the law is seldom enforced for the protection of the breeding fish; vast numbers of fish killed in close time, in fact the fisheries are ruined for want of protection; spearing by torch-light is often practised; laws not carried into execution; the fluctu-*

ations arise from the want of protection to the breeding fish ; to the fishing all the year over ; *attributes the decrease solely to those causes* ; spawning beds are in fords in running water generally ; thinks gilse a different species from salmon at ten pounds' weight ; when full of spawn they are full grown ; thinks they get their full size in 16 or 17 months ; young salmon are four, five, and six pounds at a year old, when they return to the rivers.

John Halliday.—Has been engaged in the salmon fishery forty years, as well in Ireland as in Scotland ; salmon spawn in running streams in fine sand ; don't spawn all at the same time ; full of spawn by October, and from thence even to January ; this is the general case with all rivers ; they begin to ascend the rivers in August to spawn ; many in the spring and summer months ; salmon fall off after being in the fresh water ; get

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Mr. John Halliday.—After confirming every thing which the other witnesses and myself have said in all material points, he adds, *that he thinks the same close time should extend to all rivers in Scotland and England,*—(I am indebted also to Mr. Halliday,)—and that close time should extend to the latter end of March or the beginning of April, and should not continue longer than the 10th of September ; very advantageous if the kelts were allowed to return to the sea. He thinks that the cruives prevent the mother fish from going up to breed ; and reprobates the mill-dyke without an escape.

worse and worse as the roe grows ; spawn in November, December, and beginning of January, in furrows ; *they throw themselves on their sides when they come together, and rubbing against each other, they shed their spawn, both into the furrow at once ; I have seen three pair upon a spawning bed at a time ; I have stood and looked at them, both while making the furrow and laying the spawn ; takes some days before they have done spawning ; they do not lay it all at once, takes eight or twelve days ; young fish first appear in March ; not the same number of pea in all fish, from 17 to 20,000 ; does not consider the whiting to be young salmon, or yet the gilse or sea-trout ; speaks of the injury done by drawing nets over the breeding beds ; much fry destroyed by mill-dams ; there ought to be a sluice or escape for the fry ; much mischief done by manufactories ; thinks the coble-net fishing most injurious, as destructive of the breeding places, by moving the sand ; stake-nets being still don't injure the spawn ; attributes the destruction not to the stake-nets, but to the parent fish and the fry ; strongly approves of stake-nets ; more salmon destroyed by grampuses, porpoises, and seals, than all the fishers in England ; hunt in packs ; has seen 3 or 400 porpoises at a time, go up and down with the tide.*

John Halliday again examined. — Grampuses and porpoises have taken the fish from the stake-

nets; very destructive to the fish; many porpoises captured in stake-nets following the fish; of very great importance if a method could be devised by which these rapacious monsters could be destroyed; their devastation enormous; salmon taken in the sea are the richest and best fish; become unsound after being detained in the fresh water any season, and unfit for food but when they come immediately out of the sea; close time should commence about the 10th of September, and end at the latter end of March or beginning of April; thinks the same period should extend to all rivers in England and Scotland; recommends the appointment of people to superintend the rivers in close time, and to take care of the spawning fish; great numbers of newly spawned fish are taken in February and March; decidedly of opinion that the close time should extend to the latter end of March or the beginning of April; by extending the close time so late all the fry would escape; salmon are unfit for use after the 10th of September; has seen many taken by the 1st of October quite unwholesome. Fishing opens in the Tay on the 10th Dec.; thinks this very injurious; pay no regard to the close time in Tay; equally advantageous to preserve the breeders and the kelts, as the kelts may become breeders again; ascend in August as well as at the breeding time; cruive dykes not injurious to the fish going up to spawn; in close time they ought to be taken out; not injurious to salmon out of season; recommends the

cruives because by being fixed they don't come over the spawning beds ; cruives prevent the mother fish from running up.

Mr. John Halliday again called in. — Stake-nets have increased the supply on the Newberry fishery. At page 86. speaks of a mill-dyke across the river ; takes all the water out of the bed of the river into the mill-dam, which must be very destructive to the whole fishery in the river, as it must impede the spawning fish in going up, and the fry and parent fish in returning to the sea ; might be prevented by a sluice to enable the fish to go up and down ; injury of a dam-dyke may be prevented by a stop ; I think the fisheries could be provided for without the necessity of removing the dam-dykes ; thinks that they don't see the salmon from the time they leave the river as fry until the next year early in the spring, when they begin to return to the rivers young salmon ; thinks they don't return to the river where bred ; can't distinguish one river fish from another when the fish are well grown ; nothing but salmon in a porpoise, which is their sole food. P. 89. Coble-nets not destructive but on the spawning beds ; when salmon find themselves enclosed they go to the bottom ; under rope must be close to the bottom ; has seen small sea-fish and worms in the stomach of the salmon ; greater quantity of good food in the sea than in the rivers ; the cause of scarcity, which applies to all the rivers, is the want of protection, and the increased quantity

of mill-dam dykes near the sea ; one mill-dam dyke near the sea will do more injury than all the stake-nets in the kingdom ; salmon ebb and flow with the reflux of the tide ; stake-nets to be carried high up the river and extended beyond low water must be injurious.

Mr. Charles Kerr. — Produced a copy of the process of declarator between the Duke of Athol and Maull ; a stake-net has a small mesh, which is fixed by stakes in the river, about forty or fifty yards from high water mark ; that this is a line or bag net, the mouth of which looks up the river ; that the spirlings are caught when the tide ebbs by being caught in it, and some few by hanging in the meshes ; the object was to prove that no fry was injured by the stake-nets ; the result of a long enquiry for the purpose of proving that the stake-nets were not injurious to the fry.

Mr. Steward Sheppard. — A very great number of grampuses, porpoises, and seals in the Tay, which destroy immense numbers of salmon ; much

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Mr. Kerr's evidence only applies to the stake-nets ;

Mr. Steward Sheppard's chiefly to the monsters of the deep. But if the obvious and reasonable suggestions before so often stated be carried into a law, there would be salmon enough for the grampuses of the land, without depriving those of the sea of their share.

for the interest of the salmon fishers if they could be destroyed; seen grampuses six to ten feet long; a salmon will spring out before the grampus and will be caught in his mouth in the descent; has seen it; salmon their principal food; never saw any other food than salmon taken from their stomachs; has seen 200 grampuses at a time in the Tay, and even more seals; when the seals sleep one or two always watch; on the approach of a boat they go into the water; the destruction by these monsters a great cause of the scarcity.

George Little, Esq. — Some of the fisheries have decreased and some *increased* considerably; gives an account of the annual produce; attributes the *increase* to the *appointment of water-keepers* like *game-keepers*; we place them at certain distances, and give them salaries; the Moy cost 340*l.* last year for keepers; their duty is to watch the river at night, to protect the mother fish and the fry in the proper seasons; people in Ireland are against the fisheries, because formerly salmon could be bought for three farthings a pound, and now they

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George Little, Esq. — This gentleman proves, that though the fisheries in general are much diminished, yet some are actually improved; which he accounts for in a very rational and satisfactory manner; namely, by the adoption, voluntarily, at a private expence, of that which ought to be the result of a general compulsory law. This is demon-

are sent out of the country they are much dearer ; spawn in gravel beds ; roe and melt appear at all times ; they enlarge until we give over taking them ; *get large bellied in August, September, and October* ; enter the rivers to spawn in August and September, and continue to the end of the year ; they would go back to the sea if they were not killed ; all killed in the early part of the year ; come into the rivers to rid themselves of the louse, which the fresh waters do ; soon fall off in condition after being in the fresh water ; must go to the salt water to rid themselves of the maggot, and to the fresh water to get off the louse ; make a furrow in the gravel in the current twelve feet by eight or ten ; *male and female threw themselves* on their side and WORKED ONE AGAINST THE OTHER ; continued thus many days ; if frightened would go away and return again ; takes many days before the spawning is completed ; known them forsake their spawning beds ; the bed or furrow is covered as

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stration at once : what need is there of further evidence ? I think this gentleman's account of the act of impregnation more satisfactory and more probable than any of the others. Instead of the male fish impregnating the ova *after* exclusion, the two fish, by rubbing their bodies together in close contact, complete it by a simultaneous and mutual operation. He also confirms my idea that the spawning time is the work of many days ; and that they will forsake their beds or nests if disturbed. He does not think the whittings, or salmon poul, or the gilse, are sal-

they proceed; both assist, *and while in the act of depositing* the spawn, *male* gets a hard bill on the under jaw; decreases after spawning; *spawn generally begin to rise about the beginning of March*; spawn rise from the bed like a crop of oats or a thick bryard of grain, rushing up all round the stones in very great numbers; the tails come up first; part of the pea sticks about their heads; his brother averaged the roe of the salmon at 17,000, gilse at 10,500; all the eggs would become fish without an accident; knows the spirlings, or whittings, or pinnocks, thinks they are the same fish; never see such a fish in Ireland; abound in the Solway Frith and the Tweed; are found only in the rivers where they breed; a few in the Tay; much like a salmon or trout; we do not see a salmon of that age; it is only shaped, headed, and tailed like a salmon; from twelve to fifteen inches long; some are red, but mostly white; *thinks it is*

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mon: to this I can only oppose the statement which I have already made, and add, that *experiments* are more satisfactory than *opinions*. If Mr. Little is correct in his opinion, that the male *gilse* can impregnate the roe of the *salmon*, the whole fabric of his reasoning falls to the ground; and they are (contrary to what he says) decidedly one and the same fish; for it is a well known fact, that no animal in the creation in a state of nature (not under control), *except one*, will forsake his kind and copulate with animals of a different species: *if then the gilse will impregnate the roe of the salmon, they must be one fish.*

not a salmon ; frequently don't find them in rivers where there are salmon ; see them going down kelt ; they return to the same rivers to spawn as salmon do, for the same purposes, at a certain season of the year ; thinks it full grown when of the size above-mentioned, that is, about twelve or fifteen inches long ; has never observed their fry, thinks it must be much less than the salmon fry ; may go down with the salmon fry ; thinks the gilse a different fish from the salmon ; thinks there are different kind of salmon in different rivers ; gilse differ in shape from salmon ; never exceed nine or ten pounds ; few salmon live to the age of four or five years.

George Little, Esq. again examined. — Considers the sea-trout a different fish from the salmon ; found only in particular rivers, where they breed ; not found in all salmon rivers ; do not breed, and not to be found in Ireland ; if young salmon, they would be found where salmon are ; a salmon gets seven, eight, or nine pounds the first year ; every river has a peculiar kind of fish attached to it ; has been informed that the fry had been marked at Lancaster, and had been killed the following spring full grown salmon ; does not know of the fry of gilses thus marked and caught ; admits that the male gilse could impregnate the roe of the salmon ; salmon are best and most plentiful in May, June, and July ; in August they begin to fall off ; the nearer to spawning the worse they get ; the

fishing should not commence so early, and should fish a little later; the destruction in the winter season was dreadful; a most destructive fishery carried on in the Tweed in close time, when the fish are spawning; foul fish very unwholesome; no fish should be killed in close time, or by nets travelling over the spawn beds; in Ireland we only use such nets in the tide-way, where there are no spawn*; *assigns the decrease to the non-protection of the mother fish and the destruction of the fry*; the present law is not sufficient to protect the breeding fish; pollution of the water in some rivers by machinery is detrimental; does not think liming the land is destructive; salmon going into small

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* This is the case here; the seine is only used in the tide-way.

Whenever waters are polluted with improper matter, there can be no doubt but it is extremely injurious to the fish. But this is not the case with all rivers. There are a great many, particularly in this county, where no such occurrences take place, and the water is always as clear as crystal. As salmon return to the same rivers where bred, this can never cause a general decrease. It proceeds from other causes: nor has the liming of land any thing to do with it. As Mr. Little says, spawning fish should be kept from small brooks; an unfortunate pair of fish, forced into a brook from inability to keep the main stream, will meet with certain death.

It is a bold thing to say that the magistrates do not understand the law, but, if it be true, why should it not be

rivulets is very destructive to spawning; mill-dams are very destructive to the fish and fry; magistrates are unwilling to act; *don't understand the laws*; recommends a *consolidation* into one general Act; there should be an escape for the fry and salmon from mill-leats; roe of salmon is potted for kail; gentlemen buy it; the old laws of Scotland very defective; does not know much of the English law, *but there are places in England where the fisheries might be as good as any in Scotland*; does not know much of the Devonshire fisheries, but has heard they are much neglected; complains of the magistrates and the defective laws; if proper attention was paid to the fisheries they would be very much increased, and cause a great reduction in the price; *fish in the Moy much increased by appointing people to watch the breeding fish and the fry*; the cruive fishing advantageous if not used in the close season; they take the fish going up; there should be openings for the kelt to go down; reprobates angling; *a proprietor of fish-*

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said? Mr. L.'s advice is equally sound in recommending a general consolidation act: it is quite perplexing and monstrous that there should be a different law for almost every different river in the kingdom, when the same circumstances apply to all rivers. He is also very correct in saying, that the rivers of England would answer as well for salmon as the rivers of Scotland if they were properly looked after; but, as Bell says, "*it is all poaching in close time.*" Now it

eries ; great numbers of salmon are destroyed by grampuses, porpoises, and seals ; they live wholly upon them ; salmon get bad after being in the fresh water a few days ; falls off in a week ; but seldom remains a week in the fresh water ; not injured by being taken in a cruive, as they are generally taken out once a day.

George Little, Esq. again examined. — The people collect in bodies, and will fish in spite of the owner, supported by arms, and protected by an officer of yeomanry and a magistrate ; very unwilling to convict ; water-keepers frequently shot, one killed ; witness had been shot at ; small nets used ; salmon can't get through, nor yet even the fry ; the poachers do this ; fisheries are good or bad as they are or are not protected ; small rivers best to breed in ; employs a superintendant and others under him ; *he instructs the magistrates how to act ;* they cost 3 or 400*l.* a-year ; small rivers require most protection, because the fish can take care of themselves in large rivers ; herring nets should be

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is of far more consequence to the metropolis, that the fisheries on the rivers of England should be protected, than those of Scotland, because their fish can be conveyed to London with so much greater facility, than from the north of Scotland, where a very troublesome, expensive, and tardy process is unavoidable.

This gentleman, as a proprietor of fisheries, reprobates angling.

used when the fry are coming down the rivers ; *more salmon killed last winter in the Solway frith by poachers with small mesh nets in close time, than by the lawful fishers ; destruction of the fish in close time the ruin of the fisheries ; weirs in the tide-way very destructive ; made by driving stakes and wattleing them ; stake-nets should not be put in rivers, or half a mile of the mouth of a river ; but weirs destroy the fry ; the close time cannot be observed whilst such weirs continue ; no opening left in the weirs for the fish to pass ; if weirs were to be properly regulated it would be a great improvement ;*

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There are no finer rivers for salmon in England, than those on the south coast of Devon; namely, the Tamar, the Plym, the Arme, the Avon, Dart, Teign, and Exe. I do not know much of the large river on the north coast which runs up to Barnstaple and Bideford, though there is little doubt but it is as favourable as the others ; nor of the Exe, which I have been told is much injured by the various manufactories at Exeter and Tiverton.

As small rivers are best to breed in, it follows of course that they must be protected, or every fish must fall by the spear. The men call the spearing time their harvest.

It is very true that close time cannot be observed whilst weirs continue ; but weirs might be so contrived as to allow the fish passage up and down.

People who are interested in salmon do not wish even that a single fry should be taken. This ridiculous "railing accusation" against the innocent, gentlemanly recreation of angling, is carrying the point too far, and makes one blush for the selfishness of those who urge it.

great numbers of fry destroyed by angling; angling for salmon no great injury; back fish take the fly more readily than new fish; poachers are the best water-keepers; their invariable practice is to go during the day and find where the fish are, and in the night to go and kill them.

Many rivers in England have been injured by

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It is stated in some books upon this subject, (I believe it is somewhere mentioned here,) that one of the motives for the salmon frequently having recourse to the fresh water is to rid themselves of the sea lice, but *no reason is given* for this opinion. Yesterday (14th Sept.) I had an opportunity of conversing with a very experienced fisherman; he gave the same opinion: I asked him his reasons; he said the fish had always the appearance of pain and restlessness when these vermin were on them, shifting and changing about from place to place, and constantly leaping out of the water. He said, further, that one day they observed a fish in this restless condition, constantly leaping; they drew the net several times without being able to succeed; at last they took a fine salmon with a great number of sea lice on him, and also a large lamprey eel adhering to his skin. They could perceive from the motions of the fish that he felt great bodily annoyance; and from this circumstance it is not improbable that they have recourse to the fresh water to get rid of them. There is also another very powerful motive on their actions, namely, the porpoise: more salmon were taken in the Dart, in May last, than at any other part of the year; there were then many porpoises on the coast, and nine large ones were seen up the river so far as Sharpham.

manufactories ; lime and other things will kill the fry ; tanners, hatters, and those who cure sheepskins, putting them in lime, letting the refuse go into little rivers, washing the filth from the skins, steeping of flax, and gas wasting, are very injurious ; *there ought to be an opening in dam-dykes for the salmon to go up and the fry to come down.* The improvement of the fisheries would employ the people ; great abundance of salmon in river Moy, but no sea trout ; his opinion is, that they do not return to the rivers above sixteen inches long, but thinks that the salmon is of far more rapid growth than is generally supposed.

James Gillies. — Salmon have much decreased, from the brood not being protected, and from the number of poachers in close time ; saw 250 in one

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I too could garnish this tale of infamy with many illustrious cases ; but what has been admitted — what is not denied — and what has been proved over and over again, needs not further illustration ; 'tis a revolting subject altogether ; — nothing but poaching from one end of the kingdom to the other.

Just the same sort of work carried on in the north as in Devonshire.

Constables of every parish should be appointed conservators, and a high premium should be offered for the apprehension of poachers of every description.

There certainly is a misapprehension, not only with the committee but the witnesses, about grampusses and porpoises. At page 103, the committee ask this question : “ Do

cellar in Trent; seen 50 in a night killed; always found a ready market; seen upwards of a hundred killed in a night, most of them full of roe, kippered with saltpetre to make them red; the people spear by torch-light; Mr. Bell buys the fish all the year round, even during close time; he has sold foul fish taken on the spawning beds to Bell; fishery up the Tweed ruined by fishing in close time; they poach all the winter; poachers go in bands or gangs; one water-bailiff cannot prevent them; his brother killed upwards of 400 fish at one hauling-place in one night in close time; it was a

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the grampusses, *or* porpoises and seals—"as if they took the two fish to be one sort; and the witness Mr. Sheppard says he has seen a grampus from six to ten feet;—why a grampus is commonly twenty feet long, and the ordinary length of a porpoise is from eight to ten feet. I very much doubt that there is any such fish about the salmon fisheries as a grampus, but that they are all porpoises; they are too unweildy a mass to enter far into shallow rivers generally. Mr. Halliday, at page 74, says, "he has seen the porpoises catching the salmon till they were quite glutted with them, and then they would play with them by throwing them into the air, and catching them again before they reached the water, as a child would amuse itself with a ball." I believe Mr. Halliday quite mistakes this matter. It is very true the porpoise throws his prey up into the air and catches it again, yet this does not proceed from satiety or wantonness, but from necessity; he cannot, from the position of his mouth, take his prey under water, but forces it to the surface, when it springs out of the water and he takes it on its

regular thing done ; the mischief is done high up the rivers ; if these illegal practices were put an end to, a great increase would take place immediately.

Henry Hume Drummond, Esq.—The fisheries have decreased generally in Scotland from a combination of causes, *chiefly the violation of the close time*, for the preservation of the breeding fish and the fry ; the close time should be extended to a longer period of the year ; the spawning fish and the fry should not be destroyed ; recommends persons to watch the breeding fish and the descent of the fry ; recommends persons who have no other avocations ; *there should be a break in all dyke dams ; if cruive fishing could be abolished, it would very much increase the brood of fish by opening the rivers not only for the ascent of breeding fish, but for the descent of the fry* ; noxious matter is injurious to the fish.

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return. This information I had from a person this day (15th Sept.), who said he had seen it done thousands and thousands of times. It is well known that all rapacious animals have a peculiar method of taking their prey : a lion will not spring on a horse till it turns, nor the cat on a rat ; the goss-hawk strikes *by a side shoot*, some other hawks by flying *under*, and some again by flying *above* ; the shark *turns on his side* ; this habit of the porpoise was new to me until this day, nor is it mentioned in any book. It is, thus, not an act of wantonness, but of necessity.

James Gillies again examined. — Much fry destroyed by angling ; if the close time is not altered and enforced, the rivers will be barren altogether ; cruives continue set a month after the close time.

George Little, Esq. — A number of salmon come to the cawl, over which they cannot get ; and a number of poachers go to kill them there ; no other obstruction but the mill-cawls. Edinburgh and Glasgow are supplied with an immense number of kippers killed in close time.

Sir H. Davy. — Distinguishes the salmon into two species ; the *salmo salar* or common salmon, and the *salmo eriox* ; the latter has different names in different districts, such as salmon peal, sea or bull-trout ; but its most correct appellation is sea-trout ; points out the difference ; multiply in winter and require *running water* ; has seen salmon full of

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I believe there is but one species ; that the peal, the trout, and the salmon are one species of fish. If there is any difference I never could discover it, and I have examined and compared a great many, side by side, in every part of the body, general shape, head, tail, fin, ray, brachia, lateral line, spot, and also in the flesh itself ; there is not a fiftieth part of the difference that there is between veal and ox beef.

If roe be visible in salmon in March, and such roe is not shed until the autumn months, it must lie in the parent

ova in *March*; young salmon do not go far into the sea from the rivers, for in August and September, fish, exactly resembling them in form, and from ten to fourteen inches long (called whittings or whitelings*), without visible ova or spermatie secretion, are found in salmon rivers a mile or two from

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fish to increase in number and size six months or upwards. —The roe in the peal must be the same, and therefore not fit to spawn for many months after it is seen in July and August.

* This is the salmon peal to be sure, or young salmon; but Sir H. D. is mistaken in saying that they have no visible ova. I have seen a great many this summer taken in the Dart, with a visible though embryo roe, and calculated only to be shed at a very distant time. The fish are taken twelve or fourteen miles from the sea in the Dart, and would go further up if the weirs and fish-locks would allow them.

Here Sir H. D. says, the salmon and the gilse are the same fish.

I can say nothing about Scotch law; but I understand and believe that in England those cruives, answering to our fish-locks, are altogether illegal. Three different sorts of this contrivance I have seen, and there are a great many that I have heard described which I have not seen. The public may depend upon it that there are few greater improvements to be made upon the fisheries, than a power of keeping all salmon from artificial cuts of water into the natural stream.

Sir *Humphry Davy* says, that the close time should be enlarged generally; but if a man of his scientific celebrity had specified the time when the rivers should open and

the sea, and which return to the sea without attempting a further migration ; the next year they are fit for propagation. The salmon fifteen or eighteen months old are called in Scotland gilse ; gilse differ in size, probably from their different ages ; those spawned first under common circumstances, being

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shut, it might have aided this inquiry. Since, however, I have read the evidence of the witnesses before the Committee, I adopt their opinions, that the close time should commence on the tenth of September, and not be delayed a day beyond it ; that the sessions should be stripped of this power ; and that, as all the witnesses agree, that there should be the same close time for all the rivers in England and Scotland, the legislature should cut short the discussion and fix the time at once. There is no pretence for saying that different rivers are in season at different times of the year ; it is contrary to every principle of nature.—It may just as well be pretended that partridges breed in Kent and in Cornwall at two different seasons.

It is likewise said by Sir H. and by all the witnesses, and, indeed, it is the generally received opinion, that the eggs of the salmon require to be deposited in beds covered with running water. That such is the common habit of the fish is quite certain ; how far it is absolutely requisite is another matter ; we can only conclude, that “ what is, is right ; ” that as it is so, it is necessary it should be so, though the cause is hidden from us. Every sort of bird builds a nest so distinguished in its character from that of another, that the nest of every species may be so decidedly known, as to establish a rule and a law of nature admitting of no exception : for instance, the thrush lines his nest with mud or

of largest size ; the gilse that has spawned after returning from the sea is called a salmon ; growth of salmon in the sea not accurately known ; all fisheries have decreased in England, Scotland, and Ireland. The simple remedies for this national evil are : —

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earth ; not one thrush, but all thrushes, wherever thrushes exist ; the blackbird, at all places, lines his nest with small fibres or roots. Why or for what purpose this universal distinction exists we know not ; but as it is instinctive in the animal, it is our duty to believe that the principle is placed in him for some wise purpose :—nevertheless, we cannot suppose but that the eggs of a blackbird could be hatched in the nest of a thrush, and so *vice versa* ; as we know that it is common in Egypt to hatch eggs in ovens ; and it is possible that eggs are capable of being hatched in still water, though it is the instinct of the fish generally, if not always, to prefer running streams. Trout confined in ponds never breed, but grow to a great size. But what will the world say to the following fact, for fact it is, because my informant, a man of credit, will verify it on oath ; and he has no interest in saying what is untrue. Though it is a common saying, that one had better tell a probable lie than an improbable truth, yet a truth should never be withheld because it is improbable. The fact related is this :—a few years ago my informant says that he, with two more, caught two salmon in rather a poaching way ; one of the fish weighed six pounds, which they gave to their assistant ; the other was a very large fish of about 20 pounds weight, both apparently in high and seasonable condition. He and his companion kept the large fish, and divided it ; the

1. To suffer more fish to spawn of all ages and sizes.

2. To prevent any fish from being killed in rivers after spawning.

3. To prevent the young salmon and salmon fry from being killed.

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head part happened to fall to his share; the fish was a female and had a great quantity of pea, but they were not in a very forward state, being about the size of swan shot. The next day his wife boiled part of this fish for their dinner, but it was not eatable; it looked like glue; the appearance was enough to turn a man's stomach; and it was of course thrown away. He was displeased with his wife for not having boiled it properly; but she maintained that she had dressed it as she had always dressed salmon before. He then enquired of his companion how his part of the salmon turned out, and was answered, that it was good for nothing, and totally uneatable. He was then convinced that the fish was out of season; this was in the month of September; and he immediately *buried what remained, the fish and the pea, in his dunghill*. He did this as secretly as possible, being ashamed lest any one should discover such a thing in his possession.—After this he thought no more of the buried fish, concluding that the whole would rot and perish. About two months afterwards, he sold the heap of dung to a person of the town, who sent a man with a horse to carry it into his field for manure. By the time this man had dug a little way into the heap of dung, the fellow began to hop and caper about, crying “*snakes’ eggs! snakes’ eggs!*”—and laid about him in all directions with his shovel, to crush and destroy them. He had himself no

That salmon and sea-trout return to the rivers, and stake-nets should not be allowed on the coast. No cruives or weirs, to prevent the running up of fish, should be allowed; that is to say, no close-

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idea but that they really were the eggs of this reptile, which it is well known deposits them in dunghills; but presently after, the head of the salmon and the back bone made their appearance. *These eggs were full as large as the top of a man's finger; they must, then, have grown there to that size, from the bigness of swan shot; from what causes it must be conjectured.* It is to be lamented that here the fact ends, and that an examination of some of the eggs had not taken place; but such was not the case. Still it must appear very wonderful to every one, that the pea of the fish, *under such circumstances*, should have retained life for such a length of time, and have grown so very considerably. As to ultimate consequences, there can be little doubt, but that if these eggs had been suffered to remain in the dung for the space of time that they usually remain in the sand-beds in the water, they must have been all addle. The only inferences which I draw from this fact are, first, that the eggs continue to grow after they are laid, and until they are vivified by the heat of the sun; and secondly, that they attain a size equal to the production of a fish three inches in length. I need not add, that they are very little larger than this when we become first acquainted with them, in the character and under the name of fry, and see them making the best of their way down the rivers towards the sea. We may truly say, "*Ex fumo dare lucem;*" who could have thought that such a trivial incident would have thrown light upon the works of nature, and have explained a phe-

ends ; so that there should always be a free passage for fish, that early fish may go up as well as late fish ; no burning should be allowed in a river, by which all spawning fish may be killed ;

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nomenon that the naturalist, and the most acute observer of these things, never guessed at ? It always puzzled me to understand how the young fry should first appear from an egg not larger than a pea, since they could not then exceed half an inch in length, and would be exposed, unable to protect themselves, to the ravenous jaws of trout, eels, and other fish ; independently of their own parents, who, as some say, are always on the watch to seize and devour them. It seemed an impossibility ; but the fact is now explained : the eggs, differently from the eggs of birds, must grow, after exclusion from the body of the parent ; this they do, until they attain a size capable of producing a fish of three inches in length, for they are never seen less, and the angler frequently takes them of that size. Then it is that they burst into life ; and, as Mr. Little says, “the tails come up first, part of the pea sticking about them.” This last remark is a strong corroboration of the above discovery : for if they were so small, as they must be if they proceeded from an egg not larger than a pea, it would be very unlikely that they should in the water be able to be seen at a distance, with their tail first appearing, and the pea sticking on them.

Those who have means, opportunity, and curiosity to investigate the wonderful works of the Almighty, may, by an experiment, ascertain whether or not there is any truth in this deduction. It is, at least, far more probable than that the pea should remain in the sand-beds, in the state

nets should be limited to a certain size, so as to render it impossible to sweep a river; no angling

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in which they came from the old fish, for three, four, or five months, and then produce a little diminutive animal, incapable of self-protection, and surrounded by enemies of every description, intent upon devouring him. I rather wonder that, under so particular an examination as Mr. Little's, it was not ascertained, either from him or the other witnesses, what was the actual size of the fry when it first appeared from the sand-bed.

I should not have ventured to publish the extraordinary anecdote which I have related, if my informant had not offered to attest it upon his oath; and he will do so at any time.

POSTSCRIPT.

Sept. 24th.—HAVING mentioned the above extraordinary circumstance of the growth of the salmon pea in the dunghill to a gentleman who has devoted a long life to the study of natural history, he appeared to be greatly astonished. The next morning he said to me, that he had been thinking of what I told him almost the whole night, and he was convinced that it was impossible to be true; that the eggs must have been those of a snake. Upon this, I made a point of seeing the labourer who removed the dung, and to my questions he gave the following answers:—That he perfectly well recollected the circumstance before stated; at first he thought the eggs mentioned to have been snakes' eggs,

should be allowed in salmon rivers till May, and not after October ; the period of close time should be extended.

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because he had often seen snakes' eggs in dunghills, "and squeezed out the young snakes;" (a sort of black snake which is oviparous, and lays its eggs in a dunghill: it is not poisonous, and will not bite; no provocation will make him do so;) that these were about the same size, and he could not expect to see any other eggs in a dunghill; but he soon found that they were not so, but were the roe of a salmon, of which he presently after turned up the head and jowl; that they were about the "*size of a magpie's eggs*;" of a reddish colour; not oval, but perfectly round; in number a great many hundreds, whereas a snake only lays about 15 or 16; that he did not examine their contents particularly, though he observed they contained a liquid matter; and that such as were not destroyed he carried away in the dung.

A VIEW OF THE STATUTE LAWS RELATING TO THE
SALMON AND CHANNEL-FISHERIES.

THERE can be no stronger proof that the complaint of the scarcity of fish, particularly of the salmon kind, is well founded, than the present deplorable state of the fisheries. That salmon should formerly, even within the memory of man, be sold at from a penny to twopence per pound, and now at from two to three shillings, is demonstration that there is an error somewhere. There does not appear to be any physical cause for it in this part of the kingdom; and therefore such scarcity must entirely proceed from the defects of the laws, the indifference with which they are regarded, the laxity with which they are put in force, and the various mal-practices of those who evade them. I shall not, in this place, add more upon the subject, but will at once proceed to examine those laws chronologically, and subjoin such observations as their nature suggests; at the same time pointing out the destructive practices by which they are evaded.

I have already exhibited the substance of an act embodying the whole subject, and rendering all other acts unnecessary; which, if put into

execution, will restore the fish to its former abundance. I here venture briefly to recapitulate the outlines of my plan, which is, — First, that the natural history and habits of the salmon should be understood as well as possible, in order that the subject may be discussed and conducted with every advantage. — Secondly, that on the progress of the fish from the sea to the rivers in the autumn, for the purpose of breeding, he should meet with no artificial obstructions to his attaining the sand-beds, where alone the pea can be advantageously shed. — Thirdly, that such fish, during the breeding season, when the rivers are put in defence, should be protected by the strictest laws. — Fourthly, that the old or spent fish should on no account be destroyed at any time whilst they remain unseasonable, but should have free and uninterrupted access to the salt water. — Fifthly, that the salmon fry or spawn should not be taken, but should have free access to the sea also. — Sixthly, that no salmon should be taken by any other ways or means than *by a fair net of two inches and a half broad in the mesh*, during the period specified by the sessions ; and that all unlawful nets should be seized in the first instance. — Seventhly, that all coops and fish-traps across and by the sides of rivers and streams should be prohibited. — Eighthly, that all weirs, if not absolutely destroyed, should be so constructed as to admit the free passage of salmon, at all times of the year, up and down rivers.—And, ninthly, that a sufficient num-

ber of conservators should be appointed, and sworn to see the laws enforced.

If these principal objects are carried into a law, salmon will soon be as plentiful as they ever were. As we proceed, we shall see how inadequate the present laws are to that end. Still, invalid and defective as they are, some good may arise to the public from their being put into execution, should a new act never be obtained; though it be confined to removing obstacles and seizing unlawful nets, under the 1st Elizabeth, with the assistance of a jury. The first act on this subject is,

9 HENRY III. c. 23.

“All weirs from henceforth shall be utterly put down
“by Thames and Medway, and through all England, but
“only by the sea coasts.”

Confirmed and amended by 12 EDW. IV. c. 7.

With respect to weirs, a very important determination took place a few years since before Lord Ellenborough. It was the case of Wild and Hornby, 7 East. Reports, p. 195. The pleadings and arguments of counsel may be seen by referring to the reports, but I shall only transcribe the judgment of the court as delivered by Lord Ellenborough. The action was brought for building an impervious *stone* weir or dam in lieu of an ancient *brush-wood* weir; and a verdict was given for the defendant. The question came before the court on an application for a new trial; and when it was

moved to set the rule *nisi* aside, Lord Ellenborough expressed himself as follows : “ It is impossible to sustain this verdict. The right set up by the defendant to have a stone weir is plainly founded upon encroachment. The erection of weirs across rivers was reprobated in the earliest periods of our law. They were considered as public nuisances. The words of Magna Charta are, ‘ that all weirs from henceforth shall be utterly pulled down by Thames and Medway, and through all England;’ and this was followed up by subsequent acts, treating them as public nuisances, forbidding the erection of new ones, and the enhancing, straitening, or enlarging of those which had aforetime existed. I remember that the stells erected in the river Eden by the late Lord Lonsdale and the Corporation of Carlisle, whereby all the fish were stopped in their passage up the river, were pronounced in this court, upon a motion for a new trial, *to be illegal, and a public nuisance*. Now here it appears, that, previous to the erection of this complete stone weir, there had always been an escape for the fish through and over the old brush-wood weir, in which those in the stream above had a right ; and it was not competent for the defendant to debar them of it by making an impervious wall of stone through which the fish could not insinuate themselves, as it is well known they will through a brush-wood weir, and

“ over which it is in evidence that the fish could
“ not pass except in extraordinary times of flood.
“ And however twenty years’ acquiescence may
“ bind parties whose private rights only are affected,
“ yet the public have an interest in the suppression
“ of public nuisances, though of longer standing.
“ No objection, however, of this sort, can apply to
“ the present case, where the action was com-
“ menced within twenty years after the complete
“ extension of the stone weir across the river, by
“ which it has been proved that the plaintiff has
“ been injured. Then, however general the words
“ of the ancient deeds may be, they are to be con-
“ strued, as Lord Coke says, ‘by evidence of the
“ ‘manner in which the thing has always been
“ ‘possessed and used.’ ” —Lawrence, Justice.
“ The jury themselves have found the fact that the
“ plaintiff’s fishery is injured by the stone weir,
“ and therefore the verdict is against the evidence,
“ and there is no bar to the action from any
“ length of possession in the defendant.”—Rule
absolute.

From this case there are many most important conclusions to be drawn. First, that weirs across rivers are public nuisances; that new ones cannot be built, or old ones altered; that other obstructions impeding the passage of the fish are public nuisances; that an ancient weir having an escape for the fish cannot be altered; that one person having a right to fish *above*, cannot be obstructed

or debarred of that right by another having a right to fish *below*; that though twenty years' possession may affect private rights, it is no ground to support a public nuisance.

The public will know how and where to apply this doctrine. There are too many opportunities for such application, not only in this county, but in this neighbourhood.

I lately took Mr. Chitty's opinion on the condition of Totnes weir, stating, that, within the memory of man, the salmon could freely pass over the old weir whenever there was sufficient water; that it then had an escape for the salmon, called the gullet; about forty years ago, this old weir being washed away, a new weir was built without such escape or gullet, materially altered and much contracted, having a wooden platform at the foot or bottom, which rendered the passage of the fish all but impracticable. From this moment the number of fish began to decrease, until the fisheries on the Dart were almost ruined. The platform was erected by a tenant whose object evidently was to stop all the fish at that particular place, that he might take them at his own pleasure. About two years ago this weir was again washed away in part; the fish availed themselves of the opportunity to ascend the river, and a vast increase of young salmon was immediately perceived. The weir was then again rebuilt, and *altered a second time*, by which second alteration the passage of

the fish was rendered still more difficult than it was at first, and became altogether impossible. On which Mr. Chitty gave the following answer:—
“ I am of opinion, that the above-mentioned alterations in the weir, constituting so material an obstruction to the water-course and fishery, is a public nuisance, and that any person, notwithstanding the lapse of time, may legally abate the same, or proceed by indictment. As the nuisance has been so long permitted to continue, it will certainly be most prudent to indict the parties who cause this weir to be continued.” Yet this weir still continues.

Nothing can be more prejudicial to the salmon fisheries than weirs, because they direct the natural stream into artificial cuts, where snares are erected, in which all the fish are taken. They are so contrived, in such various shapes, at different places, that no fish, great or small, can pass up or down but by the permission of the owner. A well-known paper-mill in this county has the whole contrivance under lock and cover within the mill-house, and the capture and destruction of the fish are committed in privacy. No investigation can be made, or light thrown upon the subject, but by entering a house by force and breaking lock, and these are things not pleasant to be attempted. Weirs, however, may be so constructed, as to answer the fair purposes of trade, without entailing ruin on the fisheries.— So much for weirs.

13 EDWARD I. c. 47.

A penalty for taking salmons at certain times of the year.—“It is provided that the waters of Humber, &c. and all other waters wherein salmon be taken, shall be in defence for taking salmons, from the Nativity of our Lady * unto Saint Martin’s Day; and that, likewise, young salmons shall not be taken, nor destroyed by nets, nor by other engines at mill pools, from the midst of April until the Nativity of Saint John Baptist; and in places where such rivers be there shall be assigned overseers of this statute, which being sworn shall oftentimes see and enquire of the offenders; and for the first trespass they shall be punished by burning their nets and engines; and for the second time they shall have imprisonment for a quarter of a year; and the third trespass they shall be imprisoned a whole year; and as their trespass encrease so shall the punishment.”

45 ED. III. c. 1.

Confirms the great charter, that is, the 9 Hen. III., in all points.

13 RICH. II. c. 19.

A confirmation of the stat. Ed. I. c. 47., touching the taking of salmon.—“Item, whereas after reciting and confirming the above statute, it enjoined that young salmon should not be taken during the same time at mill dams, nor in other places, upon the same pain; prohibiting the use of nets called stackers, nor any other engine destructive of the breed of salmons. *And in parts where such rivers be, there shall be assigned and sworn*

* That is, according to Sergeant Hawkins, that no salmon shall be taken between the 8th of September and the 11th of November.

“ *good and sufficient conservators of this statute, as it is*
 “ *ordained in the statutes of Westminster ;’* and that they
 “ shall punish the offenders after the pain contained in
 “ the same statute, without any favour thereof to be
 “ shewed.”

As no specific remedy is pointed out by these statutes, I apprehend the only course to give them effect is by indictment at the sessions, and that is a remedy which is too often worse than the disease ; no individual in his senses will incur the risk, uncertainty, and expence of a proceeding of this sort ; therefore it may be said that this was a very ineffectual law, and that our code had not then been ornamented by the discovery of “ summary conviction.” It however appears that the legislature was very much dissatisfied with the conduct of the conservators, for neglect of duty, as appears by the act which next follows, though it does not appear that those whom they next appointed had been more diligent ; if they had, we should not now have so many public nuisances as have been the ruin of the fisheries. Young salmon ought not to be taken at any time of the year, much less in the time prohibited by the foregoing statutes.

17 RICH. II. c. 19.

Justices of the peace shall be conservators of the statutes made touching salmon.—“ Item, after confirming the
 “ 13 Ed. I. and the 13 Rich. II., but which statutes *have*
 “ *not been hitherto duly executed* from default of good con-
 “ servators, as our lord the king hath perceived by com-
 “ plaint made to him in this present parliament ; where-
 “ fore it is accorded and assented, *that the justices of the*

“ *peace of all the counties of England shall be conservators*
 “ *of the said statutes in the counties where they be justices ;*
 “ *and that they and every of them, at all times when they*
 “ *may attend, shall survey the offences and defaults at-*
 “ *tempted against the statutes aforesaid ; and also shall*
 “ *survey and search all the weirs in such rivers, that they*
 “ *shall not be VERY STRAIT for the destruction of such fry*
 “ *and brood, but of reasonable wideness, after the old*
 “ *assize used or accustomed ; and that the same justices or*
 “ *any of them which shall find default or abuse against the*
 “ *statutes aforesaid, shall make due punishment of them*
 “ *which be found in default, after the content of the same*
 “ *statute ; and that the same justices shall put good and*
 “ *sufficient under-conservators of the same statutes under*
 “ *them, which shall be sworn to make like surveying,*
 “ *search, and punishment, without any favour thereof to*
 “ *be shewed ; and moreover that the same justices in their*
 “ *sessions shall enquire as well by their officer as at the*
 “ *information of the under-conservators aforesaid, of all*
 “ *trespasses, misprisions, and defaults, made against any*
 “ *of the points aforesaid, and shall cause them which be*
 “ *thereof indicted, to come before them, and if they be*
 “ *thereof convict, they shall have imprisonment and*
 “ *make fine after the discretion of the same justices ; and*
 “ *if the same be at the information of any of the under-*
 “ *conservators aforesaid, the same under-conservator*
 “ *shall have half of the said fine.”* — [The remaining part
 of the act relates to the lord mayor of London, as conser-
 vator of the Thames and Medway.]

It seems that the main object of this act was to
 confer the conservancy of rivers upon the magis-
 trates ; but I never heard or read of any inter-
 ference of theirs on the subject. I cannot find,

either by the statutes at large, by Burn or Hawkins, that this act was ever expressly or impliedly repealed; and if not, it is still in force, and the justices are conservators of rivers *virtute officii*. They have power to judge of the offences against the statutes aforesaid; to survey all weirs and see that they are as they should be, that they may punish the offenders *discretionally*. "Due punishment" means, such as the justices think proper. They may appoint under-conservators; and *they are bound in their sessions*, though they never do so, to enquire, by virtue of their own offices and the information of the under-conservators, of all trespasses against the said statutes, and to cause the offenders to be indicted. The 1 Hen. IV. c. 12. gives the sheriff a power to pull down weirs; but that act applies more to ships than fish. If the magistrates would act up to this statute of the 17 Rich. II. in the present state of the fishery laws, they would do a great deal of good. There must have been some great defect or neglect in the execution of this act, for, in the following reign,

4 HEN. IV. c. 11.

Commissions shall be awarded to justices to enquire of wears, kiddles, &c.—"Item, because that by weirs, " stakes, and kiddles, being in the water of Thames and " of other great rivers through the realm, and common " passage of ships and boats is disturbed and much people " perished, and also the young fry of fish destroyed, and " against reason *wasted and given to swine to eat*, contrary " to the pleasure of God and to the damage of the king

“ and people, doth grant that the statutes thereof made” [that is, the statutes before mentioned] “ be holden and kept and put in due execution; joining to the same *that commissions be awarded to certain justices and others in every county of the realm where need shall be, to enquire of all that which is contained in the said statutes, and to punish the offenders of the said statutes by fine, according to their discretions.*” The king reserves the fines, which are to be estreated into the exchequer; the sheriff is to pay the justices four shillings a day for their travelling expenses; and he himself is to be paid out of the exchequer.

As Mr. Serjeant Hawkins takes no notice of this act of Hen. IV., perhaps he thought it related more to other matters than to fish; but the preservation of the fry of fish and their improper application are particularly mentioned; and the act does not appear to be repealed; the justices are therefore entitled to their remuneration of four shillings a day if they think proper to put the act in force. Next comes an act to prevent a very great and constant abuse which is not before touched upon.

2 HEN. VI. c. 15.

No man shall fasten nets to any thing across rivers.—
 “ Item, it is ordained that the standing of nets and *engines*
 “ called trinks, and all other nets, shall be and were wont
 “ to be fastened and hanged continually day and night by
 “ a certain time of the year to great posts, boats, and
 “ anchors, over-thwart the river Thames and other rivers
 “ of the realm, which standing is a cause of as great and
 “ more destruction of the brood and fry of fish, and dis-
 “ turbance of the common passage of vessels as be the

“ weirs, kydelles, or any other engines, be wholly defended
“ for ever; and that every person that setteth or fasteneth
“ them hereafter to such *posts*, boats, and anchors, or like
“ thing, continually to stand, as afore is said, and be duly
“ thereof by the course of law convict, shall forfeit to the
“ king Cs. [that is, 100s.] at every time that he is so
“ proved in default: Provided always, that it shall be law-
“ ful to the possessors of the said fisheries, if they *be of*
“ *assize*, to fish with them in all seasonable times, *drawing*
“ *and pulling them by hand* as other fishers do with their
“ nets, and not fastening or tacking the said nets to posts,
“ boats, and anchors, continually to stand as afore is said,
“ saving to the people their right of fishing.”

The misfortune of this act of parliament is that it can only be enforced by the king's attorney-general, as the fine is to the king; it is, however, greatly abused, for there is no practice more common than for the fishermen to do that which this act expressly prohibits. I have been an eye-witness to it several times. Salmon move up the rivers on the flow of the tide, generally keeping in the middle, and in the deepest water; at the proper time after the tide has begun to rise, a net is shot off on one side, and there held generally by a man, and carried by the boat to the other, to which it is fastened, so as to be secured on the one side by the man, and by the boat on the other. This is continued as long as the fishers think necessary; which is generally about half an hour, more or less. Before the first net is drawn a second is cast off, and remains for the like space of time. Thus they con-

tinue alternately, during that part of the flow of the tide when they think the fish are in motion. This has the effect of impeding the passage of the fish, and is also a very unfair practice, since it prevents another from enjoying his right above. As the word "engine" is made use of in this act, I do not see why the power of the justices as conservators should not extend to the bars and gratings which cross the rivers and prevent the passage of the fish, and "*which are fastened and fixed every day and night.*" Few things can be more prejudicial to the fisheries; and I would humbly suggest whether these bars impeding the fish, and coops having bars only one inch and two-tenths wide, from which the fish after they get in cannot escape, being a description of engine, are not within the letter and meaning of this act, and are not altogether public nuisances, and founded on encroachment. It may be difficult at the present day to say what particular description of engine a *trink* is; but the statute requires that those who use them should have them "*of assize,*" from which it is evident, though no act mentions the size of the mesh, except that of Elizabeth, that there was an anterior limitation upon this subject applicable to nets as well as to engines. It is not much to be wondered at that but few questions have arisen on this statute, as the penalty is given to the king. I am aware but of two; the first is 12 Coke, p. 89., Mich. 9th James, in which it was held that nets are not to be fastened to posts, boats, or anchors, but to be drawn *conti-*

nually by the hand, as is the practice with other fishermen: the mischief lies in the fastening them. This case is reported in Mr. Chitty's Appendix, p. 866. The other is somewhere in the Term Reports I believe, but I cannot find it at present. It is so many years since it came under my observation, that I have forgotten the result.—I am only certain of having seen it; and should feel indebted to any one who would point it out. Fastening nets, contrary to this statute, is a practice as common as it is pernicious; but the penalty of this statute is very inadequate to the suppression of the evil; it is not within the jurisdiction of the magistrate, or the subject of an indictment; there appears to be no other remedy than an action at the suit of the king; consequently there is no remedy at all, and the fishermen may at their option place and fasten their nets as long as they please. I publish this in the hope that an effectual law will soon take place to mend the evil, for it ought not to continue.

12 EDWARD IV. c. 7.

“An Act for taking away of Weirs and Fish-garthes.” After reciting all the before-mentioned statutes, and confirming the same, for pulling down of weirs; “it is further enacted, that “if it be found that any such *weirs*, mill-dams, mill-stanks, “*locks*, ebbing-wears, stakes, kedels, hecks, or flood-gates, “be made, levied, enhansed, straitened, or enlarged,” the offenders being warned by the sheriff, of such weirs, &c., and within three months next after they do not break down the same, shall forfeit to the king 100 marks;

and if the offence is continued after three months, then the forfeiture to be 100 marks a month; half to the king, and half to him that will sue for the same by action of debt, with the like penalty against the heir of the offender.

By all these acts it plainly appears, as Lord Ellenborough said, "that the erection of weirs across rivers was reprobated in the earliest periods of our law. They were considered as public nuisances (stating the words of Magna Charta); and this was followed up by subsequent acts, treating them as public nuisances, forbidding the erection of new ones, and the enhancing, straitening, or enlarging of those which had aforetime existed."—And this act of Edward IV. plainly says, *not only that weirs but locks shall be destroyed* under certain penalties. And if difficulties occur in enforcing the payment of those penalties; if they are public nuisances and encroachments upon the rights of the public, they still continue indictable offences; and it is well deserving the consideration of all lawyers, whether these weirs, fish-locks, and fish-coops, erected across rivers, and streams connected therewith, so destructive to the fisheries, are legally erected and cannot by some means or other be removed. We see what the before-mentioned acts say upon the subject; and as it was admitted in 12 Co. Rep., that the statute of Hen. VI. "was in full force," so there is no reason for doubting, but that this subsequent one is equally so, as it does not appear to

be repealed. If it be in force, I do not see how these fish-coops and locks can be justified.

It has often been to me a subject of much surprise, that these fish-locks, contrary to the express letter of so many acts of parliament, should ever have been erected ; and still more, that they should have been continued and tolerated for so many years. One is very apt to fancy that certain things which have long existed have had a lawful origin : from having been accustomed to see the fish-locks upon this river from a boy, I always imagined that they were built on some well-grounded authority, and never entertained a doubt of their lawful existence in some shape or other ; but on closely examining this right of erecting fish-locks, I cannot find that there is any ground upon which it can be justified. This is, perhaps, one of the most important branches of this subject, for if a man can cut a channel through his *private property* to take in an entire river, and in that channel place, under cover and lock, a trap which must take every fish going up and down the river, it is quite absurd either to write or to legislate for the purpose of improving the salmon fisheries. From all that I have ever been able to collect on this subject, it appears that these proprietors of fish-locks have nothing to support their claim *but usage or prescription* ; and that though they originated in usurpation, yet the healing hand of time has sanctified their illegal creation. However, I do not understand that there is any

prescribing against an act of parliament, or that any duration of enjoyment will legalise encroachment. If the channel and trap be *private property*, the power of taking fish contrary to law cannot be a *private right*. The net of the fisherman is private property; but he cannot take fish with such net unless the mesh be constructed according to law. This seems to me to decide the question.

We are now arrived at a more enlightened and less turbulent period,—the reign of Queen Elizabeth. By the strong language used in the preamble to a statute passed in the first year of her Majesty's reign, it appears that very great excesses had been committed by the destruction of the fry of fish; and therefore, by—

1 ELIZ. c. 17.

Entitled, “An Act for the Preservation of the Spawn and Fry of Fish, (at first limited, but made perpetual by the 3 C. I.)—

1. It is enacted, that no person with any manner of net, or *device*, or *engine* made, or *to be made*, shall take or kill any young salmon or *other fish*, at weirs, mill-tails, or other places, or take or kill salmon *not being in season*.

2. No person shall take or kill salmon not being 16 inches in length.

3. No person shall fish or *take fish* with any manner of net, &c., “or by any other engine, device, ways or means *whatsoever*, but only with net or trammel, whereof every mesh or “mash shall be two inches and a half broad;” angling excepted.

4. Smaller mesh-nets may be used for taking certain small fish, provided other fish are not taken therewith, contrary to the tenor of this act.

5. Penalty is 20s. with the fish taken, and the unlawful nets or engines.

6. Certain persons are empowered to enquire into offences against this act, by the oaths of twelve men, and to hear and determine the same in their respective jurisdictions, and conservancy.

7. Application of the pains and forfeitures.

8. Lord of the Leet to enquire of offences within the Leet.

9. Forfeiture to the lord of the Leet.

10. A steward of a Leet, who does not give this act in charge to the jury, forfeits 40s.; half to the queen and her successors, and the other half to him who shall sue for the same (*qui tam*). Every juror who conceals any offence forfeits 20s.

11. If the offences “for taking, killing, or *destroying* “*of fish*, or fry and *spawn*, be not mentioned at the Leet “where they shall be committed, within one year after such “offence committed, that the justices of the peace in their “sessions, justices of oyer and terminer, and justices of “the assize in their several circuits, shall have full power “and authority to enquire thereof, and to hear and determine all offences committed contrary to the tenor of this “act.”

12. A saving of the liberties of all persons having a right to enquire of and punish the offences.’

13. This act doth not extend to the Tweed and certain other rivers.

The first part of this act is nothing but a repetition of former acts, with this addition, that it affixes a penalty, but no one can tell whether it is 20s. or 20*l.*; and it prohibits the *taking unseasonable fish*. This is fresh and wise matter; but it

was not a very wise act for the legislature to declare, in the 43d of the late king, that all salmon taken in the Dart, Teign, and Plym, between February and November, should *be deemed seasonable*, unless they had the power of making them so ; because they ought to have known that the greater part of the salmon in the early part of the year, and all the old back, or spent fish, are not only unseasonable, and uneatable, but are absolutely poisonous. Lord Chief Justice Wilmot was mistaken when he said that “an act of parliament mowed down every thing before it.” It cannot mow down or change nature, with all its power ; it cannot make a salmon seasonable that is fit only to be thrown to the dunghill, or make that fit to be eaten which is poisonous. If those who gave their assent to this extraordinary measure had been compelled first to eat half a pound of unseasonable salmon, I rather think they would have paused and considered a bit before they committed so palpable and outrageous an absurdity. We must give this act of 2 Eliz. full credit for fixing the size of salmon not to be taken, and the mesh of the net by which they are to be taken. This is also entirely new and valuable matter, and we may reasonably infer, that as the act says they shall not be taken “*by any other engine, device, ways, or means whatsoever,*” those destructive and abominable engines called fish locks, and fish coops, are altogether unlawful and indictable. This appears to me to be as clear as the noontide sun. It is equally true that no one

can justify taking salmon but by the fair and legal net, which is the net described by this act. The use of other nets to take small fish opens a door to much fraud, since, under a pretence of taking fish of little or no value, vast quantities of unsizeable salmon are destroyed: this is a widely-extended evil and a source of much complaint.

I am not antiquary enough to give any opinion upon the value of 20s. in the days of 2 Eliz., nor am I competent to say whether the penalty is 20s. or 20*l.*; Dr. Burns thinks it is the former; but under such and other circumstances there may be difficulty in recovering the penalties, which is the weakest part of the act, at least as suitable to the present times. Still the engines and traps may be seized and destroyed, which is a very great point, since it opens a free passage to the fish, and enables them to keep in the natural streams. The unlawful nets may be seized likewise if they can be found; but neither they nor the engines can be seized *before* conviction, as was determined in Bulbrooke's case, 3 Bur. 1770. It is perhaps the difficulties attending the execution of this act; and the practice of holding courts of conservancies having become obsolete, except such as are within the precincts of a leet; added to the trouble and expense of summoning juries, and the neglect of stewards to give the act in charge to those juries, that have perpetuated the use of those unlawful nets with which salmon are constantly and openly taken; and been the means of encouraging the number of un-

lawful engines, coops, and traps upon the rivers and rivulets in this county, so particularly favourable to the breed of salmon. The inquisition of a jury is a very constitutional way of investigating offences, but the conservator should have the power of seizing the unlawful nets in the first instance, instead of first giving evidence of such illegal nets, and then trying to seize them when they are not to be found. The most satisfactory and decisive evidence of the existence and state of a thing is the thing itself; and therefore the net should be taken and presented to the jury, which is more conclusive than a thousand oaths. It has been determined that the killing ever so many hares on one day, incurs only one penalty. I suppose the law is the same in killing fish; and the occupiers of fish coops, and those who use small mesh nets, can very well afford to pay this trifling sum, which is but 20s. per day for all the fish they catch, if they should be compelled to do it. It is another very important part of this act, that in default of presentments to the leet, of offences after a year, the sessions and judges of assize have jurisdiction over them; this is shamefully neglected; but I hope will not be so for the future, as it may be done at any time. Though there are many important points established by this act, yet generally speaking, it must be admitted that it stands in much need of reformation and amendment. The laws of "summary conviction," as before observed, were unknown in those days; and though they now form

so material a branch of the legislation of this country, yet there is no occasion for their being enlarged or extended. Trespasses against the fisheries may be brought before the sessions, and there tried by a jury in the first instance; this would be decisive at once, and more congenial to the spirit of the English constitution.

That dreadful instrument the spear, (*used only in the breeding time*, when the destruction of one female fish is the extermination of so many thousands) was, it is likely, unknown in those days. It is now used both by day and by night; and it is thought that more fish are destroyed by the latter than in the former: but this point has been treated of more at large in another place.

The penalty of 20s. was altered to 5*l.* by the 1 Geo. I.; but then that penalty only applied to particular rivers mentioned in the act, not one of which is in Devon, where are some of the finest rivers in England for the breed of salmon; the act, then, is not general.

Every steward of a leet is subject to a *qui tam* action for not giving the statute of Eliz. in charge to the jury. On the whole, this act of Eliz., if put in force, would be very beneficial in many points. The best parts of it, however, are turned to no account, and its defects, though numerous, are not supplied. *Still I understand the law to be, that no salmon can be taken by any device, engine, or other means than by the fair and lawful net.* This alone is of incalculable value if properly enforced.

33 Geo. II. c. 27.

No person shall take, have in his possession, or sell *unsizeable* or *unseasonable* fish. Any person may seize the same with the baskets, and charge a constable with the offender and with the goods, and carry them before a magistrate; and on conviction before such magistrate the same to be forfeited and delivered to such prosecutor, and the offender shall forfeit 20s., half to the prosecutor and half to the poor where the offence is committed; on default by distress; to be committed to hard labour not exceeding three months, unless sooner paid. Justices may remit the penalty to one half.

Those who attempt to put this beneficial act in force must keep in mind that they cannot seize any unseasonable salmon taken upon Dart, Teign, and Plym, because the parliament have made all fish taken upon these rivers between February and November *wholesome* and *seasonable*, in law, though they would poison a horse, in fact!

We have next in order of time to consider this notable statute, in which we shall have something to applaud, but much to censure; and ample justice shall be done both to its good and bad properties. Being but a local act, and of confined operations, I should not have noticed it, did I not conceive that it contained some most pernicious enactments deserving of public animadversion, as well as some principles that cannot be very easily comprehended, applying to three such rivers as the Dart, the Plym, and the Teign, which, if

properly regulated, would supply the whole county with salmon at a reasonable price. I think it proper that the defects of the act should be particularly scrutinized.

43 Geo. III. 1803.

Proprietors of fisheries in Dart, Teign, and Plym, Devon, or in any streams of water communicating therewith, are empowered at any time between the 4th of March and the 4th of December in TEIGN, "*with legal and proper nets, or hooks and lines*, to take, kill, or destroy any salmon, salmon peal, or salmon kind," and to offer to sale such fish between the last mentioned periods. And also between the 15th of February and the 15th of November on DART and PLYM, "*with legal and proper nets, or hooks and lines*, to take, kill, or destroy any such salmon, salmon peal, or salmon kind, and to offer the same to sale; and such fish taken in the periods aforesaid, *shall be deemed and considered to be in season and proper to be killed.*"

No one on *Teign* between the 4th December and 4th March, and no one on *Dart* and *Plym* between the 15th November and 15th February "shall take, kill, or destroy, pursue, hurt, or injure, or attempt or endeavour to seek, take, kill, or destroy, or to pursue, hurt, or injure any salmon, salmon peal, or salmon kind, or any of the spawn, brood, or fry of salmon, or any kepper or shedder salmon by *any act, means, or device whatsoever*; nor shall any person offer to sale, or dispose of any of the said fish so taken in the times last mentioned; and no person shall pursue, take, kill, or destroy, or seek or endeavour to take, kill, or destroy, pursue, hurt, or injure any such fish by means of any engine or weapon called a *spear*, nor offer such speared fish to sale."

"No rouges or sea trout shall be taken in the said rivers

“ between the 29th September and the 2d February, and
 “ that none of the said fish hereinbefore mentioned, of what-
 “ ever kind or description the same may be, shall at any
 “ time be *pursued, taken, killed, or destroyed, or attempted*
 “ so to be, or to be otherwise *hurt or injured* within the
 “ said rivers, *at any time of the year on a SUNDAY.*”

Offenders may be convicted before any justice, either *upon view* of such justice, or confession of such offender, or by the oath of one or more credible witness, or the oath of any such owner, proprietor, or other such person legally entitled to fish as aforesaid, or his servants, who shall be competent witnesses: penalty not less than 2*l.* or more than 5*l.*, forfeiture of fish and engines; second offence, not less than 2*l.* nor more than 10*l.*, with fish and engines; one half to the poor, the other to the informer, to be levied by distress and sale; in default, commitment to hard labour, not exceeding six months nor less than two. Justices shall order the nets and engines to be seized and cut in pieces. May appeal to the next sessions, entering into recognizances, with sufficient sureties, to abide the event of the appeal. Ten days notice in writing. Justices to determine the matter of appeal, and give such costs as they shall think proper. Costs may be levied by distress and sale. Determination of the sessions to be final, and not removable by certiorari or any other writ. A public act. Judges shall take notice of it without being specially pleaded.

The preamble to this act directly acknowledges the force and effect of the statutes of Edward the First and Richard the Second, and professes to be passed for the express purpose of altering the times mentioned in those acts for taking salmon. I mention this fact as an answer to those who fre-

quently amuse themselves by remarking that old acts of parliament are become obsolete, when they want to advance some favourite hypothesis or opinion of their own. It might have been, and I believe it was, not only necessary to alter the times for taking salmon on Dart, Teign, and Plym, but on every river; though, if the times of *defence* had been left to the county sessions, or fixed by the parliament in the first instance, it would have been much more likely to have met the reason and policy of the case, than to have settled it in the manner we have seen: especially since it appears that very little attention could have been paid to the nature of the subject.

There are very few salmon which are in season and fit to be caught so early as the 5th of March; there may be some, but not enough to pay the fishermen for their nets, time, and trouble. The defence of these three rivers is taken out of the general act. The sessions have no jurisdiction or discretion over the time for taking fish in them. Certainly, in this instance, the act does "mow down every thing before it," without mercy, judgment, or consideration: there is no power to relax its severity: the close time is two months too late and two months too early. If, indeed, it had been left competent to the magistrate to say, on the production of the fish, whether such fish were in season or not, (and it is impossible there could be any mistake even from the appearance of the fish alone,) then a stop, or, at least, some check might

have been given to this horrible, and it may be justly termed, unnatural practice. But, by a general sweeping clause, to say, that the fishing shall commence at a given time, and that all fish taken between two certain periods shall be deemed "*seasonable* and fit to kill," when they are not only uneatable and nauseous, but absolutely poisonous, is so repugnant to every notion we have on the subject, that one can neither think of it with patience, or write upon it with temper. All I will say further about this inconsiderate enactment is, that it ought immediately to be repealed: and that if the day specified for beginning to fish is to stand, the fact of unseasonableness, at least, should fall back upon the judgment of the magistrate, according to the 33 Geo. 2.—Let us now only look to the consequences of the abuse of this power. The people who occupy these fisheries are, generally, yearly tenants; they therefore destroy every thing which comes within their power, for I have heard them say, they don't know that they may have the fishery the next season, and, like the Turkish judge, they have purchased their situation, and will make the most of it. I have been credibly informed, and I believe that I could prove it on oath if necessary, that ship-loads of salmon, unsaleable in this country, have been sent away to Guernsey and other places, and sold at reduced prices: by this I mean unseasonable fish, caught after the authorised time. If these fish had been sent to Exeter, in their way to London, they would have been

seized and condemned; whether right or wrong is not the question. These fish, I understand, were old spent salmon returning to the sea after having shed their pea. There ought not to be any power to take such fish at any time; nor do I expect that any man will venture to assert the contrary. Indeed, I even doubt the validity of the power, though proclaimed by parliament, on account of its rendering the act nugatory and absurd, and affecting to do that which parliament had not the power to accomplish. To pronounce a rotten fish eatable and seasonable, is an absurdity in terms, and nugatory in effect: query, then, how far lawful? One would suppose that those legislators who could so nicely discriminate and ascertain, from the nature of the fish, why there should be a difference in the defence of the rivers Teign and Dart by only a few days, when the two rivers lie only a few miles from each other, must have known that a great many fish were not fit to be killed after the time mentioned in the act. Was this discrimination the result of science and reflection? or was it to promote the interest of the public, or the interest of individuals? It should be altered without loss of time, for the credit of the House, as an oversight; as well as for the benefit of the country, as an evil.

Hitherto we have seen that there is nothing in any of the acts before quoted, to legalize or justify the use of fish traps and coops across rivers and streams, for the taking salmon or any fish of that

species ; but, on the contrary, all the acts reprobate such engines and devices in the severest terms, as ruinous to the fish, both old and young. *For the credit of this local act*, under the circumstances in which it was obtained, it is rather remarkable that nothing should be introduced on this subject : there is nothing, however ; and the fish are to be taken by “ *legal and proper nets ;*” of course, they are to be taken by no other means. And what are the legal and proper nets ? Why, those nets which are described by the act of Elizabeth, of a mesh or make of two inches and a half broad. The same act says, that no fish shall be taken with any *manner of net, &c. or any other engine, device, ways or means whatsoever*, except a net of the above description. Upon what ground then do all these fish locks, upon these three very rivers, so destructive to the rights of the commonwealth, stand ? Clearly not by act of parliament—as clearly not by the common law. Is it then by grant from the Crown ? I believe not : and if it were, no royal grant can prevail against an act of the three estates of the realm. Neither will prescription, which presupposes a grant, sanctify usages against so many acts of parliament, or against the common law, without a grant, and hostile to the interest of the public. I think Lord Ellenborough is pretty clear and decisive upon this point. However, the facts are now before the public, who will act as they think proper. This I will venture to pronounce, that the fisheries can never prosper whilst

fish locks, which, contrary to all the laws rehearsed, abound in every direction, are suffered to exist.

It is a question well worthy the attention of the public, if ever they wish to have salmon cheap and abundant, to ascertain by the soundest law authorities, whether these fish traps can be supported or not. If an engine or device of this description be legal, then another question arises,—whether the bars of this engine or fish coop ought not to be two inches and a half wide or broad? for it seems quite irreconcilable not only to law but to common sense, reason, and justice, that the mesh of the net shall be required to be two inches and a half broad, so as to permit all unsizeable fish to escape, and, yet, that the mesh of the coop shall be suffered to be but one inch and two tenths, so as to catch every unsizeable fish that comes within it. The coop is but a wooden net; the difference is a mere distinction of terms: both are engines for catching salmon: the one is claimed to be lawful and the other is prohibited: but no one can deny, that if the *wooden* stationary net, or coop, is allowed to stand, it ought to be regulated by the same mesh as the moveable *corded* or twine net: this is nothing but common justice as well as reason. Then arises another question,—whether these engines can be at all stationary or fixed, contrary to the 2 Hen. 6., and the case reported in Coke, where the judges held, that engines and nets were not to be fastened, but were to be drawn by hand as fishermen usually draw their nets.

Fishing with hook and line is nothing more than a confirmation of the old English favorite recreation of angling, which is excepted by the statute of Elizabeth; and which, I should hope, no one will think of proposing to abridge.

The objects of the act are “salmon, *salmon peal*, and salmon kind.” By the first must be meant the *salmo salar*, or common salmon; as to the second, the salmon peal, there is a power given to kill them, under the supposition, I should imagine, that this fish constituted a distinct species from the former. I trust, however, it has been already satisfactorily shown to be young salmon, as its very name denotes. It proceeds from the *pea* of the salmon; of which millions are destroyed in traps and illegal nets, to the very great prejudice of the salmon fisheries. There is not the slightest distinction between this fish and the full-grown salmon, either internally or externally, excepting in size; and salmon vary from ten to nearly eighty pounds. As to the loose expression, “*salmon kind*,” no one can tell what it means: it is so indefinite, that we can but guess at its signification. There are nearly thirty different species of fish which authors include under the genus *salmo*, such as the chars, the *fario* or trouts, and a great many others; but the material, if not the sole object of all the *leges scriptæ*, has been the *salmo salar* or common salmon, which includes as one species, the salmon, the peal, and the trough or sea trout, of which, I believe, there is but one

species, and not even a natural variety. There may be a considerable difference, not only in the appearance, but in the quality of salmon, in different rivers, as there is in cattle even in the same county, arising from food and climate. How unlike each other are the common trout caught even in different branches of the same river, yet they are all trout, and the same species. This point has, however, been already treated at large. I shall here only repeat, that in my judgment, the salmon peal, the trough, and the salmon, are all one fish, at different ages; and that all such as are under the size mentioned in the act of Elizabeth, ought not to be taken. Still, by this "mowing down" act, they are allowed to be *caught* and *sold*, and therefore they cannot be seized after they are caught. Nevertheless, they can only be taken with the "*fair and legal net.*" Yet it is incredible the number which have been destroyed this summer in the fish coop at Totnes weir, and at the fulling-mill trap, by a small-mesh hand-net. The public ought to look into these shameful instances of violation and monopoly. They may take their "pound" if they can, but they have no right to draw even one drop of blood after it: that pound or this fish, that is, the salmon peal, can only be justly taken by the "fair and legal" mode. If, therefore, this act is enforced, they cannot be taken at all, because they will all escape through a two inch and a half mesh, which is the dimension specified by the act.

There is an universal outcry from one part of the kingdom to the other, against the causes which produce the scarcity of fish, and no attempt is made to remove them. I would recommend an Association for this purpose, such as is formed for the prosecution of felons and trespassers. I am convinced it would do a vast deal of service to this cause; much may be effected by the co-operation of many, that is wholly impracticable by the exertion of an individual. I know that this system has an amazing effect on the conduct of ill-disposed people, when they know that a whole parish are bound together to prosecute for offences. The expenses of a prosecution, though terrifying to an individual, are not felt by a great number united, and this they well know and feel.

The oversight of considering all fish as fit to kill, by a legislative act, that are not so in reality, has already been noticed. The spear, with other improper means, is prohibited during the fence days; but the use of this deadly and destructive instrument will never be abolished by the simple means chalked out by this act; a more efficacious remedy must be applied to this evil, the particulars of which have been so plainly set forth. Rouges are young salmon, and if unsizeable, ought not to be taken at all: this act gives a power to take them in the three rivers therein-mentioned, but it extends no further.

We are now arrived at the sabbath-breaking part of the act: — “No fish hereinbefore mentioned, shall at any time be *pursued, taken,*

“ *killed, or destroyed, or attempted* so to be, or to be
“ otherwise *hurt or injured*, at any time of the year
“ on a *Sunday*.” Men do not, as far as I know, take any *active* steps to break any of these prohibitions on the Lord’s day; but what do they do? why, they set a trap on the Saturday night, or rather continue a trap which is set all the season, day and night, exactly like a mouse-trap, by which the fish can get in but cannot get out; so that the fish are *virtually taken* on the Sunday, and *killed* on the Monday morning. The act says, persons shall not take, or otherwise attempt to hurt or injure them; but not only are many of the fish hurt and injured, but actually destroyed by this means, from the violent rush of the water. The fish, then, by this trap are, contrary to the express words of the act, *taken, killed, hurt, and injured*. One of Dr. Johnson’s definitions of “to take,” is “to get, to have, to appropriate;” another, “to entrap, to seize in a snare.” Whether this is a fair construction of the word “to take,” as used in the act, must be judged of when the fish thus ensnared cannot escape, but may be taken possession of by the hand, at any time when the water is drawn off. Besides, this rush at Totnes weir, according to the weight of water above, in the course of the interdicted 24 hours, injures all the fish and kills many; nine dead salmon have been taken out of this coop at one time, five at another, and many others at different times,—this is a matter of positive fact, and not of conjecture. It was intended that

all these rivers should be in defence during the sabbath day; yet this profanation is justified, as every thing else is, when there is an interest in so doing; and how?—the veil is too flimsy not to be seen through. There are four fenders which open into this weir-coop; one of them is drawn; the fish may escape if they can through the space of this drawn fender, but that is impossible, the water rushing through, as may be easily conceived, with an impetuosity that is irresistible. As soon as the fish, old and young, get into the trap at the entrance beneath, they take refuge behind the three other fenders in the eddy; if they attempt to get out by the drawn fender, the violent force of water takes their broad side and washes them back upon the bars below; when thus beaten about, they are soon either much injured or killed. This is the course pursued throughout the season *on a Sunday*, and thus are every one of the respective words of the act violated, and the public injured. If the fish can perform impossibilities, then they may get out, but as they cannot do what is not to be done, they are all taken. As a further proof that the fish thus ensnared are *taken* and cannot escape, it is a notorious fact, that on the Monday morning there are more dead and living fish removed, than on any other day of the week; yet the act says, they shall be neither *killed*, *hurt*, or *injured*! It may be very true that the fish are not taken out *by the hand* or net on the Sunday; but this is a mere contemptible quibble; the act must mean that they

shall not be *taken possession of*. Now a fish in a trap from which he cannot escape, is as much *taken* as a bird in a cage or in the hand. As well may those who use the fair and legal net, draw on a Sunday, and keep the fish in the water, encircled by the net, until the Monday morning. No man has any absolute property in fish until they are reduced to possession: there may be a qualified interest, but that is liable to defeat by the fish shifting their quarters; and this taking and stopping the fish may prejudice the rights of others. If the possession of fish in a private pond gives a property, so must the possession of fish in this trap if the trap be lawful; and I incline to think, that if fish were to be stolen out of it, the occupiers would be apt to say that the trespassers had incurred the penalties of the 5 Geo. III., or the black act. The fish, then, are as much *taken* and secured on the Sunday, as if they had been encircled in a net and only waited their deaths until the Monday morning. The net and the trap produce the same effect by different operations.

This act gives the magistrate a power to determine offences, *upon a view*, which power does not exist in the general acts. What this *view* can have reference to, I cannot imagine, unless it was intended to be directed to these particular kinds of nuisances in the characters of traps and engines; there is nothing else mentioned in the act that demands a view, over which the judgment is required to be exercised; and if so, there must be things in the contempla-

tion of the legislature, as necessary to be destroyed, which the magistrate has power to view and to decide the fate of ; but we seldom hear of these things being done. The penalties are too trifling ; but the destruction of the engines, if strictly enforced, would be of vast importance, since it would open a free passage to the fish which are seen trying to beat up the stream *throughout the year*. This natural inclination must have some object, though it cannot be explained or comprehended ; and that object of *nature* should not be thwarted by injurious and perhaps injudicious mechanical contrivances, which certainly have this three-fold effect, — viz. of giving a monopoly to one man, depriving another higher up the stream of his right, and injuring the public at large. Another vast evil attending these fish-locks is, that as they prevent the *new* fish from going up the rivers, so they operate also as an engine to prevent the *old* fish from going down to the sea. Hemmed in thus, and prevented from going to the salt water, they look more like hakes than salmon. They wander up and down, seeking for an outlet and finding none, until they pine away and die. There are a great many in this condition at the présent moment above Totnes weir.

The advantages, then, deducible from this act, are, that the fish are to be taken by “ fair and legal nets,” and consequently by nothing else ; therefore, not with the spear or other engines, which the justice may seize and destroy.

The disadvantages of this act are, that it justifies the taking *unsizeable* and *unseasonable* fish. Salmon peal, being young salmon, are all unsizeable, and should not be taken, any more than salmon fry or smelts. Nature, who is an unerring guide, should be consulted in preference to the cunning suggestions for private gain, which, however they may promote the interest of individuals, are sure to end in public mischief. It was a great misfortune for the public that this act should have pronounced that to be seasonable which neither was nor could be made so; the seasonableness of fish, as it varies so much at every part of the year, as a matter of fact, should have been made, as it was before, determinable by the magistrate.

We are now come to the consideration of the last general act for the preservation of the salmon fisheries,—its merits and demerits; and I confess it surprises me, that, in this enlightened age, something more to the purpose had not been produced. How defective it is in many particulars will soon appear.

58 Geo. III. c. 43.

1. Justices in sessions may appoint conservators to protect salmon and their fry.

2. Where no provision is made for limiting the time for taking salmon, and fish of the salmon kind in *any* rivers, justices may, at the request of any person, first giving notice of his intention in some newspaper, fix certain days, not exceeding 150 in each year, for *each river*, to be fence

days, during which it shall not be lawful “to take, kill, or destroy, or attempt to take, kill, or destroy, any salmon, salmon-trout, or fish of the salmon kind, or any brood, spawn, or fry of such fish.”—Justices may vary the number of days and the periods at which they shall commence.

3. No person shall kill any salmon or salmon kind by hot lime, or other matter pernicious to fish; or use any fire, or light, or white object; or lay down any kind of net, engine, or device; or do any act whatever, in any river, &c., for the destruction of the brood, spawn, or small fry of salmon therein (angling excepted); or shall hereafter “make, erect, or set any bank, dam, kedge, or stank, net or nets; or place any fire or fires, light or lights; or white object or objects, so that the young fry or young salmon be prevented from going down from such rivers, &c.: forfeits for his first offence, not exceeding 10*l*., nor less than 5*l*.; second and subsequent offence, not exceeding 15*l*. nor less than 10*l*., with the fish, nets, weapons, lines, instruments, boats, devices, or things used in taking thereof.”

4. Prohibits the taking or sale of fry, or any unsizeable or unseasonable fish, “commonly called old salmon,” or salmon caught during the fence days; conservators may seize such fish with the baskets, and deliver the person on whom found to a constable, who is to take the whole to a justice, and on conviction, such offender shall forfeit the fish and baskets, and pay not less than 5*l*. or more than 10*l*.

5. Nothing in this act shall *legalize* or demolish any net, fish-lock, coop, bay, or other work, “which *shall have been* or may *hereafter* be *lawfully* erected” in any *such* arm of the sea, or estuary, or mouth of any river; or in or upon any bank, land, or shore thereof, or near thereto, or in, or near any river, rivulet, brook, stream, pond, pool, or other

water-mill heat, mill-dam, sluice, or cut which communicates therewith; or to the present modes or methods used for the taking and killing fish therein, other than and as are in this act particularly prohibited.

6. Penalty may be recovered before one justice upon the oath of one witness. If penalties and costs not paid, justice may order the constable to take charge of the person convicted, and may grant his warrant to commit the offender, unless the penalties and costs be sooner paid, or otherwise may distrain for the same. Moiety to the informer, after defraying the costs; the other to the overseers of the poor. In case of insufficient distress, commitment, for the first offence, not less than two nor more than four months; second, not exceeding eight months, nor less than six; third, and every other offence, not more than twelve nor less than eight; to be kept to hard labour, without bail or mainprise.

7. Justices, on receiving information, may grant warrant to apprehend offenders.

8. Owners of fisheries may be witnesses to prove offences.

9. Penalties may be sued for in a summary way, or by action to the use of the informer. Only one imparlance allowed.

10. Forms of conviction: which shall not be quashed for want of form, nor be moved by certiorari or otherwise, but be final.

11. Persons convicted under this act not to be prosecuted under any other.

12. Appeal to be made to the next, or next but one, general quarter sessions; not to be heard unless the appellant shall, within ten days next after such judgment, and twenty days at the least before the holding such sessions, give and leave in writing, as well at the public office of the

clerk of the peace, as to the person or the dwelling-house of the informer, notice of his attention to bring such appeal; and also shall enter into recognizance in 20*l.* conditioned to try the appeal, and pay the costs within ten days. Justices may, upon *due proof of such notice given as aforesaid*, hear and determine every such appeal in a summary way, and award costs, according to their discretion, to either party. After ten days, costs may be levied by distress.

13. No action shall be brought for any thing done in execution of this act, until one calendar month after notice thereof in writing shall have been given to the person or persons against whom such action shall be intended to be brought, or left at his last usual place of abode, setting forth the cause of action, and containing the name and place of abode of the plaintiff or plaintiffs, and also of his or their attorney or attorneys; and that every action shall be brought within the space of three calendar months next after the cause of action shall arise, and shall be laid in the county where the fact shall have been committed; and the defendants may plead the general issue, and give this act, and the special matter in evidence at the trial, and that the same was done by virtue thereof; and such person, at any time before action brought, may tender amends to the party complaining, or his attorney; and in case the same be not accepted, may plead such tender in bar to the action, together with the plea, if not guilty, and any other plea with leave of the court: and if, on trial of such action, it appears that the same was brought *before* the expiration of one calendar month next after such notice shall have been given or left as aforesaid, or after the end of three months next after the cause thereof shall have arisen, or if such action shall have been brought or laid in any other county, or after sufficient tender of amends, then the jury shall find a verdict for the defendant; or if the plaintiff shall discon-

tinue the same after defendant shall have appeared, or shall be nonsuited, and if upon demurrer judgment shall be given against the plaintiff, the defendant shall have double costs; and no action, suit, information, or other proceeding, shall be brought for any offence against this act, unless the same shall be commenced within six calendar months next after such offence committed.

14. Nothing in this act shall alter any act of parliament, or any clause or penalty contained in any act, in force for the regulation of the fisheries, or preservation of the fish in any particular river, &c.

15. Saves the rights of lords of manors, who may appoint conservators.

16. Nor to affect the rights of corporations, or to diminish any rights which they "*did or might lawfully claim, use, or exercise in any river.*"

17. Nor the city of London.

Here ends the last general act relating to salmon and their progeny; and if the sense which is given to some part of it be the true sense, it were better for the public if no such act had ever passed.

The act is intitled and professes to be "An Act for preventing the Destruction of the Breed of Salmon, and Fish of the Salmon kind;" it adds very little to the laws already in force upon that subject, and yet, unless it did something more, it may have been as well, and much better, left alone. I trust, however, that the construction which is put upon the clause adverted to is not the right one; if it be, it is a "mowing down act" with a vengeance. So little has the act to do with what it professes to be, that its proper title ought to have been, "an Act to

regulate the times of the year for taking salmon, and fish of the salmon kind," and there it should have stopped, or have said something more satisfactory and effectual. The act consists of 4,420 words, and contains one *new* clear idea, though it is very doubtful how far even that has a beneficial effect; and one other idea, whose signification is extremely ambiguous. This will appear in the progress of our examination.

The power of appointing conservators, as we have already seen, is mere surplusage, unless the legislature extend the power and define the duty of that officer, giving him also protection and remuneration; and particularly the power, without warrant, to seize and search suspected characters prowling about by the banks of rivers, or lighting fires — known and avowed spearers, in fact — and to take them before a magistrate.

The power here given to the county sessions to fix and regulate the fence days for each particular river, is not only a *new* but a perfectly *clear* idea. It will be pronounced by some to be one in the praise of which too much cannot be said, and that it entitles the person from whom it sprung to the gratitude of every lover of good salmon throughout the kingdom; that it is the essence of good sense and sound policy, since it places the exercise of a discretionary power in the wisdom of the county, the magistrates being gentlemen renowned for their talents, activity, science, learning, independence, and probity; that without adding to the number of

useless, contradictory, and incomprehensible statutes, it completely supersedes the necessity of any local act whatever, and justifies the compression of the whole subject into one enactment ; and that, as there are different opinions as to the times when salmon are in season, and ought to be caught, in particular rivers, such magistrates, in their legislative capacity, would have the power, by hearing evidence, to regulate this point to the satisfaction of every one, if that be possible ; at least to the satisfaction of themselves. I once thought this all very right, but, on more mature consideration, I think it extremely problematical, and am of opinion that it will be more for the advantage of the fisheries, that the legislature should at once put the rivers in defence for the whole 150 days, which include the six winter months. Whether the salmon of different rivers are in season at different times of the year is another question, and has been fully discussed already. The number of days, too, that they may put the rivers in defence, being 150, nearly half a year, exactly corresponds with my idea, that salmon should only be taken in or about the six or seven summer months, being prohibited the three last and the three first in the year. Of this, more is said at that part of the subject in which we have considered of the time when rivers ought to be put in defence.

The third section of the act professes to contain the main objects for which it was passed ; namely, that salmon should not be injured by hot lime, or

an incorporation of improper matter with the water. This is saying something, and doing nothing, because the offence is one which is never practised; and if it be practised, it is an offence at common law, indictable before the sessions, and punishable in a much more exemplary and effectual way than that provided by this heterogeneous act. A mischievous farmer's apprentice may have been known to throw a stone of lime into a brook in order to catch a few trout, but this is a very rare occurrence; and it is so because happily it defeats itself, since the lime corrupts the fish, and makes them unwholesome. Bad as human nature is, it is not often that it indulges in mere wanton mischief to answer no end at all. When a public mischief is committed, it is to answer some private end or other: either personal revenge or individual advantage; in the present case, if the one, it can but seldom occur, and only in *particular* places; the other can never happen at all: this, then, amounts to nothing.

It next says, that no such means (that is, of the lime, &c.) shall be employed, or any *fire-light* or *white* object used, or any engine for destroying the spawn or brood.

Fire and white objects are used to attract the old breeding fish within the reach of the spearer, that they may be struck with greater and more certain effect with that instrument, *not to destroy the spawn.*

The destruction of the spawn by other improper means is prohibited by former acts, as well as the

use of improper engines and erections to prevent the spawn from descending the rivers. And here again it is extraordinary, that the fire, the light, and the white object, should be secondly mentioned, when they are only applied for the purpose of attracting the old fish. What then can lights have to do with the fry, or their passage down the rivers? The whole of this section does extremely little good to the cause, and is not very intelligible either; for the magistrates do not know how to frame a conviction by it. Taken in any sense, it is nugatory and useless. It is very true that salmon ought neither to be destroyed by lime nor by arsenic, and they are as often taken by the one as the other: but who will eat fish rendered putrid by poison? for lime corrupts and putrifies the whole animal mass; it acts upon a fish, as any one who chuses to take the pains may, at any time, see it act upon a snail; it turns the whole body yellow and corrupt. The offence, then, of destroying salmon by lime, is little more than imaginary. The young fry certainly ought not to be thus destroyed, nor are they; neither ought they to be obstructed in going to the sea, nor are they, but in a very partial way; for if they were, there could be no salmon. This rant, then, about destroying and obstructing the spawn, is a mere outcry about nothing. Those who imagine that the decay of the salmon fisheries proceeds from the destruction of the fry, or the barriers which prevent them from going to the sea, know very little about the

subject. Formerly, perhaps, there might have been great havoc of the fry ; they might have been given as food for swine and dogs, when they were in multitude like sand upon the sea shore ; but it is not so now, generally ; a few, and but very few, are taken by children in the diversion of angling, nor is there any public object in taking a few little trifling fish, not bigger than a man's finger : besides, from their being so small, the few of them that exist generally contrive to make their escape to the sea. Salmon, then, are not scarce *because their spawn are destroyed or obstructed*, though impediment will occasion destruction, and destruction scarcity. This is all delusion and absurdity. The scarcity proceeds from other causes. It is not because the *fry* are destroyed, but because they have *never existed* ; because the parent stock *is obstructed* in going to the beds of the rivers with the freedom and facility they require ; because, when they do get there, (scarcely any one can tell how,) *the spear is too much used during the breeding season* ; because, after the defence ceases, *which always begins too late and terminates too soon*, the rivers and their branches are again shut up, and the old or spent fish are kept in a state of imprisonment in the fresh water, where they perish ; it is because the young salmon, called salmon-peal and sea-trough, on their return from the sea to the rivers, *are mostly taken in traps and coops in an unsizeable state* ; it is because unlawful and *small mesh nets* are used ; it is by throwing the fish

out of the natural stream, where they ought to be only taken *by fair and legal nets, and might protect themselves, into artificial cuts, where they are unfairly ensnared and taken in fish-locks*; and in the Dart, Plym, and Teign, by taking the unseasonable, old, stinking fish, which the parliament has made sweet and good. These are the evils to be remedied;—they are substantial, and not imaginary. If the legislature be seriously desirous of restoring the salmon fisheries to their former prosperity and productiveness, they must set about the work, not by throwing sand into the eyes of the public, or lime into the rivers, which may answer the end of a monopoliser, but they must do it by an independent, public spirited, and energetic dash at the *spearer*, the unlawful *obstructions*, the *traps*, the unwise limitation of the close-time, and the other evils before mentioned; then, and not till then, will or ever can the salmon fisheries prosper, so as to be of any service to the public.

The fourth section is little else than a repetition of the 33 Geo. II., only extending the penalty from 1*l.* to 5*l.* How strange it must appear to the public at large, that all unseasonable fish shall be seized and destroyed, excepting such unseasonable fish as are taken upon Dart, Teign, and Plym, where they may be caught, and sold—if a purchaser can be obtained; and eaten—if any one has the stomach to swallow them.

Here, then, is an act of parliament professedly passed for the preservation of the brood and fry of

salmon, which in no one particular contributes towards that object, further than by regulating the fence days. That this is the fact, is obvious and undeniable. And when we come to consider the next clause, the fifth section, if the construction that some folks put on it be the legal construction, it has the appearance of something even more censurable, and excites a considerable degree of suspicion, not only with regard to the sincerity, but the actual intention of the whole act. It invidiously cuts up, in short, *per stirpes*, the good effect of every act from Magna Charta to the present day. However, I trust it is not so, and that, even under this construction, the section is nugatory, and bears within itself its own death-warrant. I hope it can be relieved from this obloquy. Some say, that though the professed and avowed object is to preserve the salmon spawn, yet the true object of this section is to legalize the fish-coops. If this be indeed its real intention, and the various obstructions and fish-traps can stand against all the acts which we have just seen, particularly that of Elizabeth, which says, that the fish shall not be taken by any engine, but the fair net;—against the common law, without grant or prescription, but, by mere dint of daring encroachment, from the neglect of putting the act of Elizabeth into force,—then, I say, that unless this section be repealed, the situation of the salmon fisheries is of a very hopeless nature. If this section is to countervail the general policy, and to

prevent the operation of the act, then the act is altogether nugatory and useless ; for it is as plain as demonstration can make any thing appear, that if a fish-coop may be set across, and taking in, the whole of a stream, so that no fish can pass or repass without going into this trap, it ceases to be a question, —it is an insult to common sense to make it one,—whether the spawn can be preserved, or the fisheries ultimately prosper. The law should judge of these devices as they stood before the passing of this act, and they should stand or fall by their own merits.

Every stream abounds with these fish-locks. Many belong to gentlemen of rank and fortune in this county, who ought to shew a different example ; and to exhibit to the public, by a liberality of conduct, and an observance of the law themselves, where their true interest lies. But they ingeniously profess that the spearers do all the mischief. I grant that the spearers do enormous injury, *and it must be put a stop to*, by some means or other ; but if fish were plentiful, as they would be but for the traps, and the various other obstructions, the practice of spearing would die of itself ; for the wretched spearer would have no object in destroying an *unseasonable*, worthless fish, when he would be able to buy a good wholesome one at, perhaps, a penny or three half-pence a pound again, as salmon have been known to be bought within the memory of man. At present, whilst the trap proprietor destroys a hundred

without reproach or fear of consequences, the spearer is sent to the county gaol for killing a single one.

“ The colonel swears the agent is a dog ;
 The attorney vows the colonel is a rogue ;
 Against the thief the attorney loud inveighs,
 For whose ten pounds the county twenty pays ;
 The thief damns judges and the knaves of state,
 And dying, mourns small villains hang’d by great.”

I suppose this is human nature : but in all such cases, where the pursuit of private advantage invites men to overlook the rights of their neighbours, the controlling power of the legislature becomes doubly valuable, in the adjustment of conflicting claims, and in the protection of public right.

We will now endeavour to ascertain the fair meaning of this section.—Those who are interested in the continuation of fish-locks say, that it completely establishes the legality of those erections. I think otherwise : though I admit that the words in the first part are indefinite and equivocal. Taking, however, the whole together, the sense is clear enough. The section consists of three separate sentences or divisions : the first is, that the act shall not *legalize* any fish-lock *lawfully erected*. This is important indeed ! But what is lawfully erected does not want to be legalized : if it be lawful, nothing more is required : the stipulation is, therefore, nugatory.—The next sen-

tence is, that the act shall *not destroy* any fish-lock *lawfully erected*. If it destroyed any thing that was lawful, it would be the first instance of the kind that was ever heard of. A lawful right can be taken from no man without remuneration. Here the meaning is clear enough, but the provision is altogether unnecessary.—The concluding sentence is, that the act shall not extend to the present modes of taking fish therein, (that is, to the fish-locks,) other than and as are in this act prohibited; (that is, that no lime shall be used in such locks to destroy the salmon or the spawn, or any engine or obstruction to destroy the spawn, or impede their passage to the sea.) The construction, then, which I put on the whole of this section is, that the act does not extend to or legalize any fish-lock, nor does it prohibit any such, nor shall it extend to the present methods used for taking fish in such fish-locks, other than such as are by this act prohibited, which are those before mentioned. From hence I conclude, that if the act shall not extend to make fish-locks lawful, nor yet suffer them to be destroyed under an idea that they may be unlawful, and that if it does not extend to the modes of killing fish in such fish-locks, or to any other, except such as are prohibited by this act; then, I say, that this act leaves these points in question still open, and has nothing whatever to do with any fish-lock. It does not, in its own language, in its very words, “extend to” them; it neither declares them, nor the modes of taking fish therein, to

be lawful or unlawful, but leaves the question of legality upon the same ground that it stood upon before the passing of this act. It is as clear as day-light, notwithstanding what is said by the trap men, that this act neither justifies the establishment or the demolition of fish-locks, or the methods of catching fish in them. To give it any other construction would be quite monstrous; it would have the effect of palming a fraud upon the public, of perverting the object of the act, and of rendering it altogether nugatory and inoperative. The only wonder is, that the act should mention fish-locks at all, since it does nothing either way towards deciding the question of their legality. I do not say that they are unlawful; let that be determined by better authority; but I consider them as encroachments on the privileges of the public, and injurious to the rights of fishery belonging to other persons. I, therefore, trust that enough has been here advanced to establish the necessity of clearly ascertaining whether they are legal or not, and to convince the unprejudiced, that, whilst they continue, it is impossible for the salmon fishery ever to attain to a flourishing condition.

The penalties of this act,—which, if it legalize the fish-locks as they are at present used, is the most ruinous and insidious ever passed,—are to be enforced by “summary conviction;” a new but very common method of enforcing compliance with an act of parliament, dispensing with the constitutional method of so doing by trial by jury. Since

this exotic was first introduced into English soil, it has flourished but too luxuriantly ; it has spread so rapidly, that if not checked in season, it must infallibly, at one time or other, undermine that privilege in which Englishmen have so much gloried, and which has been termed the palladium of their constitution : like other wild and pernicious weeds, it will choke the growth of the more salutary ; and legitimate trial for offences must be eventually lost. Such is its extensive use, that it seems naturalized already. We hear of its increase even without surprise or emotion, when those who first suggested the plan even dreaded to hazard its proposal. Such is the effect of habit. It has, nevertheless, been severely reprobated by Mr. Justice Blackstone, as sacrificing too much to “convenience.” It has enormously increased since his time : “it is still increasing, and ought to be diminished.” Let any man consider, in a constitutional point of view, the alarming powers with which the magistrate is armed by the recent Trespass Act. I do not say they are necessarily abused, but I could quote an instance or two where they have been abused most flagrantly. The practice may be productive of great good ; as all arbitrary power, well exercised, must be ; still the power is unconstitutional, the example is dangerous, and its increase is, therefore, to be dreaded.

I do not mean in this place to give a history of the laws of summary conviction, how they originated, how they are administered, and how they

have been reprobated;—though I have such a work ready for the press;—but, exclusively of the difficulty of drawing convictions on penal statutes, the minuteness and severity with which they are examined by the courts of law, who very properly watch this kind of outlandish trial with a jealous eye, and the number of them which we see quashed, I consider that one person, who is made the *judge of the law, the fact, and the punishment*, uniting in the same person the several offices of judge, jury, and executioner; appointed by the crown, removable by the crown, and, therefore, under the influence of the crown, possesses a power much too great to be held by one individual. It is incompatible with the natural and inherent privileges of an Englishman, who, from the great fountain of our liberties has a right to say, “*nullus liber homo capiatur vel imprisonetur, aut aliquo modo destruatur, nisi per legale iudicium parium suorum vel per legem terræ.*” Such an almost unlimited power of fine and imprisonment as the laws, upon many occasions, give to one or two men, is truly terrific.

This is all I shall say upon this subject here, having already, in my proposed bill, suggested that all offenders be bound over to the court of sessions in the first instance, and there tried by a jury like other offenders. It is better to do this, than to allow an appeal from a conviction, which, from its intricacy and nicety, may be quashed; by which justice may be defeated, and the benefit of exem-

plary punishment lost to the public. The expence must be nearly the same.

How far it is right that owners of one fishery upon a river, should be competent witnesses to prove offences committed by the owners of other fisheries upon the same river, must be determined. It seems contrary to the spirit of English law, and breaks down the boundaries of evidence, which generally incapacitate as witnesses all persons who are interested. Circumstances might arise in this particular instance to render such testimony dangerous. In some cases, such as requiring a man to prove his own qualifications to kill game, it may be necessary to reverse the order of things; but how far it is necessary in such a case as this, when the fact can be proved by other means, is another question.

Though the penalties may be recovered by summary conviction, yet an alternative power is given to an informer by *qui tam* action.

Lords of manors may appoint conservators within their manors. Now this is a very great evil, and if ever another act should be passed relating to the salmon fisheries, this power should be altogether withheld; or, if conceded, the sessions should retain not only a concurrent jurisdiction, but a controlling power to appoint conservators likewise within and over such manors. This may appear wrong at first; but I ground my opinion upon *a fact*, and there may be many such facts for aught I know. There is no calculating upon human consistency or propriety in individuals where

private interest is to be promoted, or passion to be gratified. The office of conservator is of a public nature ; its duty is to see that there is no infraction of the laws, nor prosecution of private advantage, beyond what is compatible with an observance of them. Suppose the lord of a manor, through whose extensive rights a river runs particularly favourable to the breed of salmon, *should neglect or refuse* to appoint any conservators to protect such salmon ; suppose he should appoint an *improper person*, who either connived at the malpractices of others, or, perhaps, was an associate and co-operator with the offenders ; suppose he should not disapprove of the spearing of salmon, from motives which we will not investigate ; suppose he should threaten an action against the county conservator for coming within his manor to see the laws respected ; —and this latter supposition is the *fact* to which I allude ;—then, I say, that under such circumstances it is but reasonable that the sessions should have a concurrent power to appoint county and general conservators, if the lord of a manor appoint improper persons ; and a controlling power, if he should appoint none, to see the law properly executed. Perhaps the magistrates at large may have this concurrent power, under the statutes of Edward and Richard, if they would but exercise it. No harm, however, can arise from expressly stating in the new act what ought to be done, if such act is ever passed. Besides, if conservators be to be excluded from entering manors, there is pretty nearly

an end to their office altogether ; for there is hardly any fishery that is not within some manor. As we recognize the maxim of *salus populi*, I trust this will appear reasonable and proper.

Having now gone through all the general laws relating to the salmon fishery, and made a few remarks on the local act of the 43 Geo. III., it must appear evident to every one, that though by an energetic exertion to carry those laws into execution by aid of a public association, a great deal of good might arise ; yet, as they now stand, neglected and unenforced, and the right of the public imperfectly ascertained, it is no wonder that salmon are as scarce and as dear as we find them. To make the laws as complete as the nature of the thing will admit, it is absolutely necessary that a new act should be passed, embracing the whole subject altogether, repealing the general act of the 58th of the late king, and the local act for the Dart, Plym, and Teign, and *all local acts* whatever. As the law of nature is the same at all places, so ought to be the law of the land to give nature proper effect. The whole law upon the subject, then, might be brought under one view, and comprised in one act, without perplexing the magistrate in making him turn to different acts, and find out what he wants by piece-meal, running the risk of frustrating the administration of justice, by quashing a conviction, or entangling him in frivolous minutiae. To shew in a most striking manner the inapplicability of the present law, we need only look back

to the last act, where instead of the fire, the light, and the white object being prohibited, as employed against the old fish to attract them to destruction, it is made to apply to the young fry and their passage down the rivers to the sea, where no one ever thought of employing lights or white objects. So great a misconception as this of the nature of fish ought to be rectified; for it is very well known, that lights are the principal means by which the breeding fish are attracted, and then destroyed by the spear, during the autumnal months. I can place any one at a particular point where he may see at the same time, every night throughout the months of October, November, and December, several fires blazing by the banks of a river, and the spearers moving about from place to place, with lanthorns, employed in this work of destruction. There is no effectual law to prevent the practice; and until there be such, this evil, with the many others I have enumerated, can have no hope of remedy.

THE END.

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